American VOCATIONAL Journal

NOVEMBER, 1958

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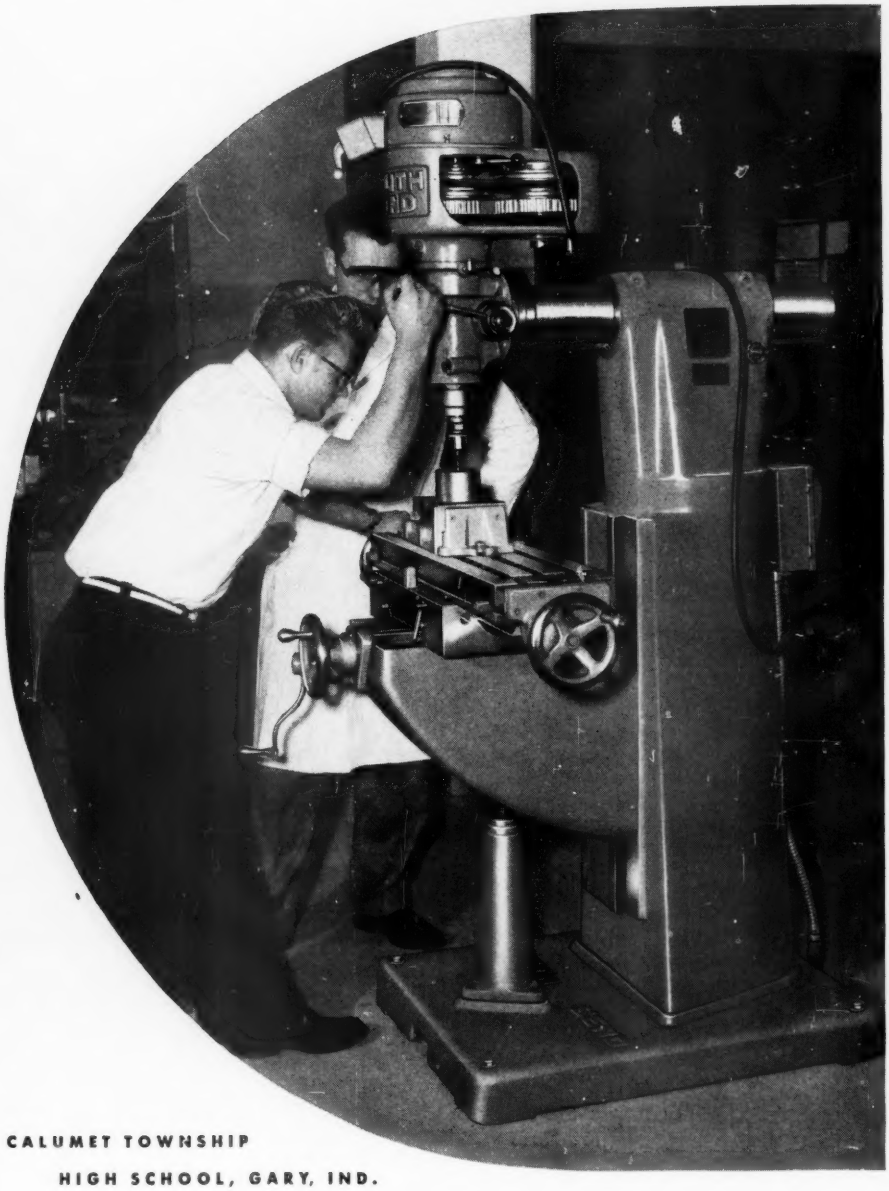

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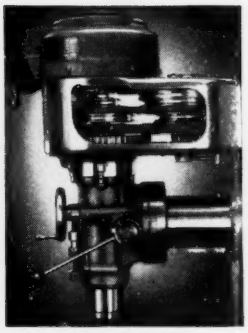

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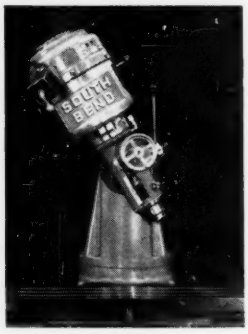

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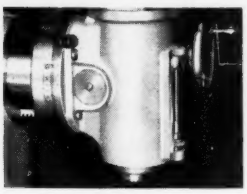

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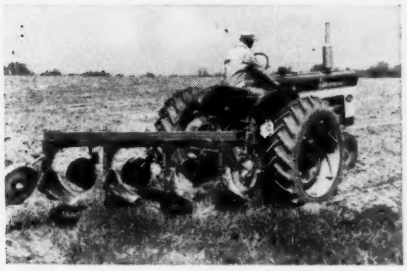

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Comment

WILL YOU express the sincere thanks of the California delegation to your staff for making everything concerned with the AVA Convention so successful.—BYRON J. MCMAHON, California State Chief, Bureau of Agricultural Education.

* * *

HAVING BEEN President of the AVA at the time it was necessary to name a successor to Lindley Dennis, I felt very proud on September 26 to be in the audience at the Ohio Vocational Association meeting in Columbus, which was addressed by M. D. Mobley.

The Association was unanimous in its approval and commendation of the fine talk given by our Executive Secretary, outlining what has been done and is being done legislatively and how our type of work fits into the freedom and economy of the world.

I wish to have everyone know how we in Ohio feel about Dr. Mobley and his contribution to industrial arts and vocational education.—FRANK C. MOORE, Director of Industrial Arts, Cleveland, O.

* * *

CONGRATULATIONS on a fine convention. It was a pleasure to represent the *National Future Farmer* at this fine meeting.—JOHN FOLTZ, Regional Advertising Manager.

* * *

I WISH to express my most sincere appreciation and the appreciation of our entire organization for the fine work which members of the AVA staff have been doing. We were indeed most happy with the recent convention and realize it takes a great deal of work during the year to bring about such a successful meeting.—L. E. CROSS, Executive Secretary, National Vocational Agricultural Teachers' Association, Inc.

* * *

THE JOURNAL is certainly a most valuable periodical. — MARIE P. GRADY, Avenal, Calif.

* * *

IT SEEMS to me that each issue of the JOURNAL improves. Convention coverage this year was excellent—better than usual. Although I receive many monthly periodicals I would not give up my issues of your fine publication.—DOROTHY BELL, Baltimore, Md.

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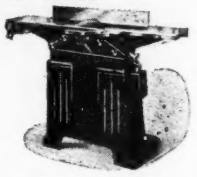

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THE COVER

In the month that observes Thanksgiving as well as American Education Week, let's not forget to count our blessings.

America's public schools have a record of success that is indeed enviable. So let us give thanks and keep faith with education USA as Americans everywhere join forces to make sure a good job is done even better.

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All members of the American Vocational Association, Inc., receive the Journal; 25 per cent or more of membership dues reserved for Journal. Membership applications should be submitted through state vocational association secretaries. Order library and non-member subscriptions at $3.00 a year from AVA, 1010 Vermont Ave., N.W., Washington.

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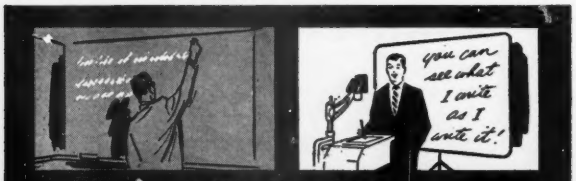

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Applause

—to Joseph L. Williams, President of the Wyoming Vocational Association, who thanks all members of his state organization for making it possible for him to attend AVA's '58 convention in the current issue of Wyoming Vocational Education News. In his statement, Mr. Williams says:

"To me the high point of this convention was the realization that the AVA and the individual members are one. This is best expressed in the words of President R. E. Bass:

" 'Throughout convention week let us remember that the AVA is a federation of affiliated state associations. The strength of AVA lies in the strength of affiliated state organizations. The individual member, therefore, is the most important cog in AVA's wheel of progress. . . .' "

* * *

—to Dunwoody Industrial Institute, Minneapolis, for 100 per cent membership of its vocational teaching force in AVA and the Minnesota Vocational Association. The total of 74 active members includes three who are Life Members. John Butler is Dunwoody's Director.

* * *

—to John P. Walsh, Director, Trade and Industrial Education Branch, U. S. Office of Education, who was awarded his Doctor of Education degree by The George Washington University October 7. His dissertation is entitled *Qualifications, Preparation and Competencies of Trade and Industrial Teachers.*

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Latest Word from WASHINGTON

NOW THAT THE clamor to teach all American children how to design and build Sputniks is, itself, drifting off to outer space it is time to analyze our recent hysteria about apeing Russian education.

Indeed, we must note with melancholy amusement that while our newly arrived educational experts—the pundit journalist and the uplift orator—still cry for science and math in every first-grade primer, the Kremlin too has taken a new look at the satellite circuit and now decrees less schooling—of any kind.

Only a fortnight ago, Soviet Premier Khrushchev demanded a drastic shake-up of Russia's 10-year primary-secondary school curricula. He contends it trained youth for higher education only, not for real living. The very system we are being admonished to worship doesn't seem to work in Russia.

Apparently Khrushchev finds that cramming calculus and logic into the heads of all young Russians of small use when he imprisons so many graduates in lifetime jobs of coal mining in the Urals or chopping wood in some Caucasian forest.

"Young persons now graduating from higher Soviet educational institutions have little knowledge of practical matters, and inadequate training for production," says Khrushchev. "Their schooling is somewhat divorced from life."

TO REMEDY THIS, Khrushchev now calls for an eight year course of "fundamentals" as a substitute for his 10-year system. He hopes it will combat "an unhealthy attitude toward physical labor."

From now on—according to Khrushchev's plan—most of Russia's 28,700,000 students will get only primary education. Some, but not many, will go on to night high school, while working at factory or farm by day.

Only a very few—those Khrushchev considers to be "politically reliable"—will go to college, and part of this "reliability" depends on their ability to work with their hands. Colleges and universities will be closed to all but these "reliable" few—except on a part-time, night class basis.

Those making the grade as part-time students, after full-time day jobs, are to be allowed two or three days off from work each week in their final college years.

KHRUSHCHEV FACES A GROWING shortage of working manpower and unrest among what he considers to be "over-educated" high school and college graduates. He finds products of Soviet education "unable and unwilling to work with their hands."

And so he orders the participation of all Russia's youth in the Communist equivalent of vocational education, or on-the-job training. Those best fitted to succeed Tolstoy and Dostoevski will learn, instead, to repair and operate tractors. Those talented for the ballet or medicine—or the psychological laboratories bequeathed to mankind by Pavlov—will now labor on the collectives or in the factory centers, learning to work with their hands.

If our self-appointed experts on American education are to be consistent with their thinking of the past year, then certainly they will now ask for a rapid shift of our public school programs to vocational education for every boy and girl.

Naturally this idea seems ridiculous to those of us who believe vocational education has done as much to better the lot of humanity as has higher education, science and the liberal arts.

WE HAVE NEVER felt that one or two Sputniks in the sky required every American to become an astronomical physicist. We did not believe compulsory math was doing much to improve Russia's freedom, its body of laws, its humanities, its way of life or its standard of living. And we have always been certain that imitating Russia would not do much to defend us from state collectivism.

AS A MATTER of fact, we vocational educators warned that this kind of monkey think- ing could well surrender our American heritage to the Kremlin on the vital intellectual front. We feel the same way today. If Communism captures our brains with Sputnik propaganda, how long will our bodies stay free?

Vocational educators regard as absurd the philosophy of those who would recognize an aristocracy reserved exclusively for scientists, physicists and engineers. At the same time, we decry the rival contention of many versed in the humanities that mankind's genius is restricted to literature, history, law and the arts.

We can see and we cherish the poetry of motion in the deft fingers of a craftsman. We believe the expert use of a machine tool is as essential to American culture as the beautiful, immortal words of Shakespeare.

The technician, the toolmaker—skilled and schooled for a flowering of special talents—are no less important to an Explorer rocket than the physicists with hands perhaps too clumsy to install or adjust its precision instruments.

CONTRARY TO popular fallacy, vocational education is not always the panacea for students with little or no talent for Latin or math. Nor is it a dumping ground for those who flunk modern questionnaires so lugubriously called "IQ" tests.

By vocational education's own aptitude examinations, the poet, the opera singer or the mathematician might well be classed as inept. The do-it-yourself fad proved that—to the quiet satisfaction of every carpenter and plumber called in to undo almost unbelievable handiwork.

It takes extraordinary talent and training to be a good surgeon or a toolmaker, a good salesman or a nurse, a good farmer or a homemaker. Let us have our own educators develop all these inate virtues with their historic, unmatched skill.

AND NOW THAT we Americans have demonstrated to the world—and ourselves—that our schools are quite as much a match for the Sputnik as they have been for any other facet of civilization, let us get back to reason—away from hysteria.

LET US GET on with our dedicated task of providing all kinds of education for all kinds of God's children—each with his heritage of evolution's aptitudes—and let's do it the American way.

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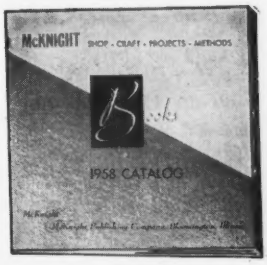

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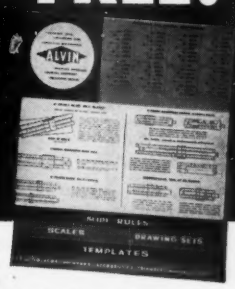

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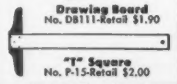
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"The OVA is . . . concerned with the professional development of teachers, a program of public relations for vocational education, a research program directed toward discovering the need as well as the ways and means which can be employed in furthering vocational education, and a sound legislative program which has as its goal the support and development of an increasingly effective program of vocational education."

* * *

—to the auto shop class at Harding High School, Warren, O., for qualifying as the best teen-age group in the entire nation in supporting a safety check program. As such, the class received the National Circle of Safety Award from Look magazine and the Inter-Industry Committee of the National Safety Council October 5.

* * *

—and "welcome home" to Mr. and Mrs. Ernest C. Comstock who have returned to Denver after spending two years in the Middle East where Mr. Comstock (the former State Director of Vocational Education in Colorado) served as advisor on technical education with the ICA Mission to Iraq.

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Agricultural Education, Business Education, or *Agri-Business?*

By S. S. Sutherland

NATION-WIDE changes and trends in agriculture and business are summed up very well by John H. Davis writing in the January 1956 issue of the *Harvard Business Review:*

"Today rural America is being subjected to terrific forces which are altering its very form and essence. Not only are farming methods and practices changing but alterations are taking place in our entire rural society. The truth is that modern agriculture is inseparable from the business firms which manufacture production supplies and which market farm products. It could not operate for one week if these services were cut off and by the same token the business firms which serve agriculture would exist without purpose except for farmers to buy their supplies or to sell commodities to them. Today agriculture and business are highly inter-related and give every promise of becoming even more so."

Sensing this growing relationship between agricultural and business education, a study was initiated early in 1955-56 by Rulon C. Van Wagenen, Chief of the Bureau of Business Education in California and his colleague, Byron J. McMahon, Chief of the Bureau of Agricultural Education. Conducted by the author and Dr. O. E. Thompson of the Department of Education, University of California at Davis, this study was planned to determine the number and kinds of positions in typical agricultural businesses which seemed to require agricultural training and to determine training requirements, both agricultural and business, for workers in these positions.[1]

In this study, two trained interviewers spent a total of 83 days and drove over 10,000 miles collecting data in 14 typical cities and towns in California. In collecting the data, the interviewers contacted the owners or managers of 327 firms concerned with processing, distributing, or selling agricultural products and services. Prior to the launching of the study, itself, pilot studies conducted in three other cities served to refine the instrument used for gathering the data and perfect techniques for carrying out the larger study. Instead of using a random sampling, the study was confined to cities and towns located in agricultural communities representative of the major agricultural areas of the state.

SIGNIFICANT findings of the study included the following:

- The most common types of business employing agriculturally trained persons are those engaged in the sales and services of agricultural products and farm supplies.
- About one-fifth of the 24,305 persons employed by these companies needed agricultural training.
- Over 1,400 agriculturally trained employees will be needed in the near future to fill anticipated new positions in the firms studied.
- In general, the educational preparation was not considered adequate for any level of employee in these firms. Roughly half of the employers rated the education of their sales, semi-skilled, and supervisory employees as inadequate.
- Agricultural training, terminating at the high school level, was adequate for a large proportion of the semi-skilled and skilled workers, while for sales persons more advanced training such as offered in junior college and college was needed. For consultants, supervisors, and managers college education was almost a must.
- In the field of agriculture, training in crop production was important for all levels of employment. Shop skills were of major importance for the semi-skilled and skilled worker and of minor importance for others.
- Training in salesmanship, customer relations, and other phases of business education were rated particularly important for sales persons, supervisors, and managers and of lesser importance for semi-skilled workers, skilled workers, and consultants.
- In the field of general education, training in speech and mathematics was also important for workers at all levels. In general, however, these subjects were rated of somewhat less importance than more specific training in agriculture and business.
- The businessmen interviewed were interested in the educational programs offered in the local community. They were interested in participating in the planning of the cur-

Dr. Sutherland is Chairman of the Department of Education, University of California at Davis.

[1] *The training required by workers in Agricultural Business and Industry in California, California State Department of Education, Sacramento, California, 1957.*

Survey Shows Business Needs Ag–Trained Workers

riculum of the school and, to a lesser extent, in hiring high school students part time during the school year or during vacation.

- Problems encountered in the hiring of students varied but were not as insurmountable as researchers were led to believe prior to the study. Labor unions were quite strict about allowing companies to employ students in some plants while they were lenient about others.

- In general, new agriculturally trained employees were obtained by hiring qualified persons from other companies. School and institutional placement were used only to a limited extent.

- Starting salaries for each level of employment tended to fall into rather fixed patterns. Common starting salaries for the semi-skilled and skilled workers were from $270 to $329 per month. For the other three categories—sales, consulting, and supervisory and managerial — starting salaries range from $330 to $389 per month.

- Top salaries for semi-skilled and skilled employees tended to fall in the $330 to $389 bracket with less than seven percent receiving over $509 per month. Top salaries for sales persons tended to have two peaks, one in the $450 to $500 per month category and another in the over $630 group. Ultimate expected salaries for consultants, supervisors, and managers were higher, with the average in the $510 to $569 a month category. Over one-fourth of this group could earn over $630 per month.

- A large number of these businesses were quite recent in origin. Sixty-three of the 327 had come into being in the past eight years, while 114 (or 35 percent) had started since World War II.

IT WOULD APPEAR that there is a real opportunity for a cooperative educational program including agricultural education and business and distributive education, each contributing its part to the training of workers in agricultural business.

Major changes would probably not need to be made in the instructional program in vocational agriculture as now carried on in the first two years of high school. The class instruction and the supervised farming activities of the present program would be as appropriate training for agricultural business as for farming. Somewhat more emphasis should be placed on instruction and work experience in crop production and farm mechanics and somewhat less on livestock problems, but in the main it appears satisfactory. In the junior and senior years, however, and at the junior college level, curricula for those students planning for careers in agricultural businesses should include not only courses in vocational agriculture but also courses in appropriate business subjects. Supervised practical activities in agriculture probably should be supplemented by work experience in agricultural business.

It is evident that there are excellent and expanding job opportunities for persons with a combination of agricultural and business training. It is further evident that businesses associated with agriculture are growing both in numbers and in size.

Since the establishment of many of these businesses has been a comparatively recent development, opportunities in this type of employment for agriculturally trained persons have been largely overlooked. According to the findings of this study, the annual demand for agriculturally trained persons in business in California is larger than that of farming itself. The replacement needs for farm operators in this state appear to number about 5,000 per year. In contrast to this, the statewide immediate needs for agriculturally trained persons in business were found to be in the neighborhood of 8,000.

There is an apparent lack of communication and liaison between education and business, at least as far as agricultural education is concerned. It is evident from the findings of this study that the schools have not utilized agricultural businesses either to provide work experience activities or as a source of advice with respect to the content of training programs. Furthermore, agricultural business has not turned to the schools as a source of trained employees.

The oft repeated statement that general education is considered more important by employers than by specific vocational training is not borne out by the findings of this study. In contrast there was an evident tendency on the part of superivsors and managers to rate high those areas of education which have a direct application to everyday work.

Obstacles to cooperative work experience training or to cooperative training in general between schools and agricultural businesses were not found to be insurmountable.

There are implications for agricultural and business education at all levels, i.e., the high school, the area school or junior college, and the four-year colleges of agriculture. Evidently, much can be done at the high school level in training students for positions as skilled or semi-skilled workers. Junior colleges and area schools may well concern themselves with programs designed to train sales and service personnel and the four year colleges with the training of consultants, supervisors, and managers.

LEADERS IN agricultural education and in business and distributive education in California are convinced that a training program that combines instruction and work experience in both agricultural and business education is feasible. Plans are already under way to establish pilot programs in some four or five junior colleges designed specifically to train for sales positions in agricultural industry.

As a necessary prelude to the establishment of these pilot programs, teams from four junior colleges will be brought together soon. These teams will include directors or representatives of agricultural departments, business departments, counselors, and guidance and placement personnel. They will take the initial steps in setting up cooperative curricula in these four schools and to determine the number and content of courses in agricultural education, business education, and general education which may be appropriate to the needs of sales persons in agricultural businesses in these respective communities.

These steps may culminate in the development of an educational "first" —a curriculum in "Agri-Business"—a program of vocational education which may not be limited to training in one specific field; one neither agricultural education nor business education alone, but one that involves the contributions of both.

NVATA—*a strong professional organization*

By James Wall

THE NVATA CAME about because the teachers of vocational agriculture felt a need for such an organization. Professional organizations for educators exist for two main reasons, namely, the improvement of educational standards and the improvement of teacher status. NVATA is, of course, mainly interested in the improvement of the standards for agricultural education and the improvement of agricultural teacher status.

YOU ARE AWARE of the tremendous problems facing agricultural education at the present time. We are living in an agricultural revolution, the like of which has never been seen before. Unparalleled thought and effort will need to be given by all of those affiliated with the profession if the problems of a changing agricultural economy are to be solved and the challenges facing us today are successfully met.

On one hand we are faced with the problems of the changing agricultural picture and on the other we are being challenged by those who would cripple and destroy vocational education as we now know it. Strong professional organizations can be one of our major weapons in meeting successfully the challenges with which we are faced. Therefore, it behooves every segment of the profession to unite in a common effort which will result not only in the preservation of vocational education but will also cause it to advance with general education in meeting the needs of our ever changing economy.

Every vocational educator, from the highest to the lowest, must be made aware of the many educational problems of our day and then join hands with his fellow workers in the development and execution of solutions that will leave no doubt in the minds of men as to the true need and value of vocational education in the public schools of our country.

Rapidly it becomes more and more apparent that we must have strong local, state, and national organizations of vocational educators. Agricultural teachers are probably the best organized teacher group in America today. We have won our spurs and others are asking us to participate in affairs of national importance.

Mr. Wall is Past President, National Vocational Agricultural Teachers' Association and Instructor of Vocational Agriculture, Waverly, Nebraska.

THE NVATA has enjoyed a most cordial working relationship with the AVA and it is our sincere desire to continue to work with and support that group in every possible manner. We continually emphasize to our membership the importance of supporting and cooperating with the AVA. We do our level best in attempting to synchronize and channel our efforts along the lines of the parent organization.

Figures recently released by the National Education Association show that teachers of vocational agriculture rank at the top in percentage of membership in their own professional organizations as well as in general education organizations. This high position of professionalism is held on the local, state, and national levels. This record of professionalism is a tribute to the teacher trainers and supervisors and is indicative of the high caliber of the men who have been and are presently the leaders in our chosen field.

THE STRENGTH of NVATA is largely dependent upon the strength of the various state associations of agricultural teachers. Therefore much of our effort is devoted to activities that we hope will motivate state associations to take a more active interest in vocational agricultural education and the welfare of the agriculture teacher. Regular newsletters issued by our executive secretary and by the vice-presidents, visits to state conventions by national officers, and the sending of delegates to national conventions are a few of the things that have resulted in a tremendous increase in the interests and activities of the state associations. National and regional meetings have given the opportunity for an exchange of ideas never before possible. Both vocational agricultural education and the agriculture teacher have gained as a result.

Our ultimate effectiveness cannot be reached until every teacher of vocational agriculture is an active member of his state and national organization. The state supervisors and teacher trainers can do much to hasten the arrival of that day.

A WISE STATE supervisor encourages and supports a strong state association of agriculture teachers. He has a stronger state program if his men are working with him rather than for him. A stronger program also results where teachers are asked to assist in the planning and re-planning that will need to be done in order to meet the challenges of today and tomorrow. If advisory councils are good on the local level, and we know they are, it should then follow that the wise supervisor will frequently call on some of his more stable teachers to assist him in determining a course to follow.

Teacher trainers probably have the most important role to play in the development of good professional attitudes among teachers. Trainees need to know the purposes *of* and the need *for* professional organizations. Course time devoted to the development of professionalism can well be made one of the most important areas of instruction for the trainee. Many states are now following the policy of inviting state association officers to appear each year before the trainees in the interest of professional organizations.

A report of a comprehensive follow-up survey of graduates of 31 schools over a five-year period

In Virginia—

Career Candidates Get Jet Assist from DE

By John O. Perreault
Supervisor, Adult Education
Richmond Public Schools

EACH YEAR SOME 1500 graduates of programs of education for distribution leave Virginia's high schools to assume full-time situations in the market place. How many of these young people, trained in the arts of distribution and merchandising, obtain and retain full-time employment in these fields? That is the question which Virginia's Distributive Education Service set out to determine. To put it another way, the question boiled down to this: *Does distributive education prepare its students for careers in distribution or its related fields?*

TO FIND authoritative answers to these questions a follow-up survey of 31 schools representing every section of the Old Dominion, and covering program graduates over a five year period (1951-1955) was undertaken. Specifically the study set out to achieve three objectives:

- To discover what the distributive education students who graduated between 1951 and 1955, or who dropped out of the school at the end of the junior year, are now doing.
- To determine to what extent the students have remained in distributive occupations since high school.
- To establish a procedure of follow-up that can become a permanent annual part of distributive education's program of appraisal and evaluation.

The answers obtained and the method of securing those answers have meaning not only for distributive education coordinators and guidance personnel, for school administrators and cooperating merchant groups, but also have major implications for current and prospective students and their parents, as well as for the economic life of the community. In these days of renaissance or rebirth of public interest in all aspects of education as a major factor in our national life, it is important that educators and educational institutions engage in a real job of soul-searching to determine whether purported objectives are actually accomplished—or whether like beauty, educational programs are their own excuse for being! Fortunately, Virginia's Distributive Education Service had long developed the habit of self-appraisal. Consequently the above question presented not a challenge but an opportunity to fortify a belief in the fundamental philosophy of co-operative training.

From a survey report developed by the Distributive Education Service, State Department of Education, under the direction of Dr. Natalie Kneeland, Research Specialist, Richmond Professional Institute.

Interested DE Students Have Opportunities Unlimited

Records of the Virginia State Department of Education show that 5,733 students had completed one or more years of distributive education training in Virginia's public high schools during the five year period covered. Of this number 1,701, or approximately 30 per cent of the state total, had been trained in the 31 schools included in the study; 1,167 individual responses from former students were received and tabulated. These represent 20 per cent of the total distributive education state enrollment for the survey period and 69 per cent of the distributive education enrollment in the 31 participating schools.

The 31 schools included are scattered across the entire state, and vary considerably both as to size and community economic-social-cultural pattern. It seems, therefore, correct to conclude that the composite picture developed from responses is truly representative of the state as a whole.

JUST WHAT did the survey show in respect to the occupational status of former distributive education students? The graphs and commentary included in the full survey report provide a mass of important and interesting detail, but the major implications can be gratifyingly and simply stated.

The program of cooperative training in distributive occupations is doing a remarkable job of selecting and training Virginia's young people for permanent employment in the field of distribution.

Over half (54 per cent) of the program alumni are now working in distributive occupations. The last years of the survey period indicated an up-turn even for this relatively high figure. (The report of the single year 1955 shows a full 64 per cent so engaged.) Twenty per cent of the respondents were fulfilling their military duty at the survey time and were, therefore, temporarily withdrawn from the civilian labor force. Doubtless the majority of these will re-enter the occupational ranks upon the completion of military duty.

Eighteen per cent of the respondents are women engaged in household duties; these constitute a reserve of trained workers who are prepared to periodically move in and out of the stream of distribution as the demands of business or the needs of their families indicate.

The fact that four per cent are engaged in full-time educational activities on the post high school and college level, or that seven per cent combine such activity with a part-time job, indicates that the vast majority of students consider their distributive education course in the high school to be terminal training. This of course is what the program was designed to be. The increase of 10 per cent in 1955 of those going to college is dramatic proof, however, that students can select distributive education or other phases of vocational education as a part of their high school program without, as is frequently erroneously held, eliminating the possibility of a college education. This increase also reflects the effort made in that period to make scholarships available to distributive education high school graduates, and so raise them to the professional ranks in the field of distribution, or prepare them to join the educational force as distributive education coordinators. Already several of these young people are back in Virginia communities providing training opportunities for the "younger generation."

DISTRIBUTIVE education is designed to prepare its students for full-time occupations in many segments of the field of distribution. Broadly speaking these include retailing, wholesaling and the service trades. As a practical approach a large percentage of the students receive their "basic training" in retail establishments. What kind of jobs do they hold thereafter? The survey shows that 72 per cent remain in inside selling or retailing. Five per cent eventually move to outside selling, and 23 per cent enter the service trades either on their own or working in an established firm.

Among the variety of situations reported in these areas are the following:

Selling, stock work, route selling, banking, finance, designing, credit work, cashiering, automobile selling, insurance, advertising, checking, beauty shop management, radio and TV service, traffic, service station management, and trade association service.

IT WOULD seem probable that the student who has had the advantage of special guidance and training will move forward more rapidly in his selected field. Does distributive education provide such a "jet assist?" Again the survey reveals some gratifying answers. Sixteen per cent of the graduates are in management or supervisory positions. These include situations as owner, sole manager, assistant manager, finance manager, department manager, and sales supervisor.

The survey report can best be summarized in the words of R. R. Elliott, chairman of the advisory board of a nationally known clothing firm. "We in the retail industry believe that distributive education . . . will do much to solve the shortage of trained personnel . . . Students in the program who are interested in a retailing career have unlimited opportunities."

Parent Education via TV

Mothers and fathers still have the biggest job in the world. Remembering this, San Diego is captivating a community with a televised family life service that for six years now has offered real "carry-home value!"

By Bernice H. Papworth

THE IDEA OF PRESENTING parent education information by way of television was taking hold in San Diego, Calif., in 1952. A Television Promotion Committee was organized, the members of which were leaders of the various community agencies and organizations interested in Family Living. This committee proposed that Mrs. Bernice Papworth, Supervisor of Adult Homemaking of the San Diego City Schools, be responsible for the final planning and presentation of the ten-week TV Family Life Series.

THE PROGRAM was a cooperative venture with representatives of various community agencies as well as lay personnel participating. Stations KFMB-TV and KFSD-TV generously invited the presentation of this weekly thirty-minute telecast without cost, furnishing first-rate service and all-out cooperation. It was a community project, captivating the interest and enthusiasm of a large listening audience throughout the city and county. It was an operation meticulously planned, with a positive, informative, practical, educational approach and a real "carry-home value."

THE IMPETUS of the initial Family Life Series, 1952-53, brought requests from the community for a continuation of this series. Consequently, for the past six years, Family Life Series has been telecast to a large, enthusiastic listening audience under the auspices of the Department of Adult Education, San Diego City Schools, with Mrs. Papworth in charge of the presentation of the program, as follows:

Understanding Your Child From 5 to 10, 1952-53; *Understanding the Preschool Child,* 1953-54; *Understanding the Teenager,* 1954-55; *Understanding the Family,* 1955-56; *Understanding Family Problems,* 1956-57; *Understanding Freedom's Parenthood,* 1957-58.

In compliance with requests from a listening audience of 125,000, the seventh series has been planned for presentation in 1958-59.

The series included study and discussion in the following areas:

Child Growth and Development—physical, mental, emotional, social, and spiritual; The Impact of Today's World—how the child's world differs from that in which we grew up; also, Helping the Child to Become a Responsible Person, The Meaning of Discipline, The Value of Routines, The Meaning of Play, The Art of Communication, The Importance of Feelings and Attitudes, Personality in the Making—the Child as an Individual, Parent-Child Relationships—Family Fun, Emotions—Knowing How to Recognize, When to Divert, Release or Redirect, What to Expect, and Accepting the Child.

Thoughts carried throughout the entire series included some of the following:

Parenthood is the biggest job on earth. Living with children can be exciting, challenging, and rewarding if we know what to expect from them and what they need from us. Grow with the child. Never aim to eliminate problems—learn to work out of them. Love is the core of the home.

Also, everyone is an individual. The feelings, actions, and relationships of parents directly affect the child and the development of his personality. Self-understanding is the first step in understanding children. A sincere feeling of friendliness and warmth is the first essential in helping children with their feelings. We must be able to communicate. We

A Vast Listening Audience Demands Continuity

must understand our children and accept their feelings. We recognize the feelings of love, anger, hate, and fear as basic.

Also, play provides a means for manipulative, motor, dramatic, and creative activities and through play the child expresses his feelings. Discipline is guidance. Each child should be helped to become the best possible person in his power, capable of working successfully with others and doing certain things well. Our goal for our children is not to help them to become adults who never express strong feelings, but to learn to use their emotions and to live with their feelings. We want our children to feel that they are loved and that they belong, to feel approved, to be recognized in their own rights, and to feel successful. By helping our children use their feelings, we are helping them to become happy, well-adjusted individuals.

THE FAMILY Life Series has been enthusiastically received by the community as a valuable instrument of instruction and inspiration.

A UNIQUE and valuable feature of these programs is the county-wide organization of listening groups with both professional and lay leaders in charge. Such groups vary in size from two hundred meeting in school and community auditoriums to small groups of five or six meeting in homes. In order to assist lay leaders in discussions, listeners' questions are planned for each telecast and provided through Parent-Teacher Associations and other similar organizations to all interested persons by way of a schedule including date, topic, and listeners' questions. Questions are also received by telephone and answered during the telecast. The questions asked are intelligent and meaningful and give the program an informational atmosphere conducive to better communication between the participants and the home viewers.

The techniques employed include demonstrations, interviews, sociodrama, skits, panels, symposia, and discussion, with a pattern of introductory, summarizing, and closing inspirational remarks by the instructor. Continuity is considered imperative by the vast listening audience.

Topics for San Diego's Family Life Series

First Series

Understanding the Child from 5 to 10

1. At Home With the Family in 1953
2. Your Child Goes to School
3. Parental Love
4. Do's and Don'ts
5. Emotional Problems of Growing Up
6. Making the Grade as Dad
7. Your Child's Health
8. Parent-Child Counseling
9. The Family Council
10. Mail Call — discussion of questions sent in

Second Series

Understanding the Preschool Child

1. Your Family in 3-D
2. How Do Children Grow?
3. Who's Your Child's Boss?
4. At Home With the Family
5. Mail Call — discussion of questions sent in
6. What Do You Expect?
7. Are You Getting Through to Your Child?
8. What About Emotions?
9. Where Are We Going?
10. Mail Call Again — discussion of questions sent in

Third Series

Understanding the Teenager

1. What It Means to Grow Up
2. So You Have Problems?
3. Dating, Driving, Drinking
4. Attitudes Have Changed
5. Mail Call — discussion of questions sent in
6. Youth in Conflict with Society
7. Submission vs. Rebellion
8. You Can Be Friends
9. Ways of Life
10. Mail Call Again — discussion of questions sent in

Fourth Series

Understanding the Family

1. Today's Family
2. Successful Marriage
3. The Biggest Job on Earth
4. Growing Together
5. Mail Call — discussion of questions sent in
6. Made In Your Image
7. How to Live With Your Teenager
8. Coming of Age
9. This Is Your Life

Fifth Series

Understanding Family Problems

1. The Nature of Human Nature
2. The Family as a Unit
3. Family Recreation and Use of Leisure Time
4. Discipline Is Education, Not Punishment
5. The Teenager
6. Mail Call — discussion of questions sent in
7. Family Social Problems (Alcohol)
8. Family Social Problems (Crises)
9. Family Social Problems (Financial)
10. Pulling Together as a Family

Sixth Series

Understanding Freedom's Parenthood

1. Let Freedom Ring
2. The Art of Self Defense
3. In the Mirror of Life
4. New Horizons in Democratic Living
5. Problem Solving
6. The Geometric Pattern
7. I Plead "Not Guilty"
8. Oceans of Emotion
9. Attitudes Toward Change
10. Untarnished and Unafraid

AVA's Labor-Management Relations Committee posed for a formal photo. Standing, Thos. H. Quigley, Wm. G. Loomis, Frank P. Johnston. Seated, Cecil Stanley, J. F. Ingram, Samuel L. Fick, Earl M. Bowler, Robert M. Reese

More

The Humphreys (Mr. and Mrs. Carl M. and son) pause to chat with Presidential nominee Samuel L. Fick

Catharine Grant and Jack Walsh at the T & I Women's Section lucheon

Dr. and Mrs. M. A. Browning of Texas. Dr. Browning is State Director in the great state of . . .

J. E. TePoorten, Coordinator, Wisconsin Vocational and Adult Schools, presided at the Safety Education session

Mrs. R. E. Bass and Dr. M. D. Mobley

Conventionalities

F. J. Konecny, who takes office December 1 as AVA Vice President for T & I; with Presidential Nominee E. M. Claude of Illinois

The Seachanters, directed by Chief Musician Julius Whitinger, United States Navy, enchanted the attendance at the second general session

New Developments in Bookkeeping

By John M. Aichele

THE WORD *new* is a term of relativity. It is difficult to mark the spot where something becomes old and something else becomes new. Therefore, some of the items discussed here may not be new to a widely-read business educator but could constitute a good idea for some classroom teachers.

The new developments in vocational bookkeeping can be divided into three groups: new developments in recording; new trends in instruction; and, the electronic age.

ONE OF the new developments in recording is the use of three lines in the heading of accounting forms such as the balance sheet, trial balance, work sheet, and profit and loss statement. This makes the heading easier to read. The more recent bookkeeping textbooks are again advocating two zeros for even dollars instead of the dash in the cents' columns. Machine bookkeeping has been the major cause of this change. Many firms contend that the use of zeros reduces the quantity of errors when the original records are fed into machines. Of course, this isn't really a new idea because textbooks as early as 1919 were using zeros. Sometime in the late thirties or early forties the dash was introduced. Now we are back to using zeros.

Many businesses are using the invoice number or the receipt number instead of a journal explanation. This reduces unnecessary writing while it saves time and labor expense. If a number column is included in all journals, the explanation is eliminated completely. If the details of an entry are desired, the bookkeeper can refer back to the original record by using the number in the number column as the clue or index. There has been an increased use of numbered lines and numbered pages in business forms. If both sides of the paper are numbered, the bookkeeper's task of locating the proper lines when making entries is easier.

The terminology of bookkeeping has been changing. The title *Abstract of Accounts Receivable* or *Abstract of Accounts Payable* has been changed to *Schedule of Accounts Receivable* and *Schedule of Accounts Payable*.

The word *allowance* is being substituted for the word *reserve* in connection with bad debts and depreciation accounts. *Supplies Used* has become *Supplies Expense* and *Expired Insurance* has become *Insurance Expense*. This has enabled the beginning bookkeeper to recognize them as expense accounts. The elimination of the purchases and sales journals by using the invoices themselves as journals is another new development. There is a rapid trend toward putting many businesses on strictly a cash basis. Cash discounts are disappearing in many lines of business. Terms are rapidly becoming net cash. This results not only in the elimination of the sales journal, but also the accounts receivable account and the accounts receivable ledger.

Purchases are also being handled on a cash basis. No entry is made until the invoice is paid. This eliminates the purchases journal, accounts payable account and accounts payable ledger.

THERE HAS been a change in the use of deposit slips. Since banks don't use the clearing house numbers on the deposit slip, some businesses are listing the name of the customer on this line. This results in better and more complete records. The banks themselves are constantly improving their methods of handling deposits. A new deposit slip has been developed with the top half being the receipt. The amount is entered by machine. This eliminates the pass book in checking accounts. Some banks have eliminated the deposit slip in relation to savings by using a machine to enter the deposit directly in the pass book.

Several large manufacturers are going over to dollar bookkeeping; that is, rounding off to the nearest dollar for reports and other financial statements.

The modern trend of instruction in the bookkeeping area is highlighted by the idea of going from the simple to the complex in our teaching. Because multiple-column journals are used in business, some people think that they should be taught in the very beginning of bookkeeping. These people overlook the fact that we are teaching basic principles, not specific applications. We must use the simplest approach: the two column journal, the T account, the simple cycle, and the simple statement.

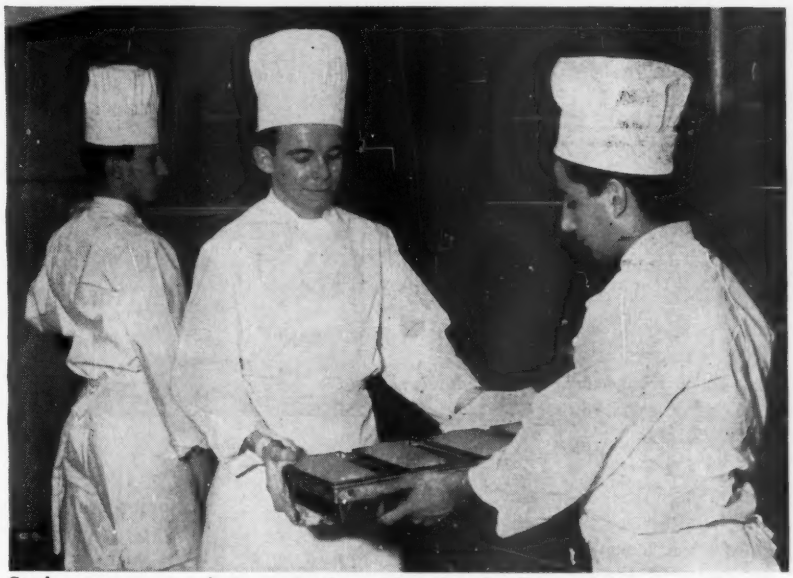
Teachers are dividing learning materials into shorter units. The amount that a student can grasp at one time is limited, and teachers are becoming aware of this fact. Shorter units are being taught, always followed by intensive drill. The long, unifying problem has its place in bookkeeping, but its place is to unify learning, not to acquire basic understanding. Teachers are realizing that the bookkeeping problem should be separated from the arithmetic problem. The use of round numbers in presenting new principles is becoming an accepted practice. Realistic numbers have their place, but only after the student has mastered the basic principles. Business educators, textbook authors and teachers all feel the need for better illustrations. By

(Continued on page 23)

Dr. Aichele is chairman, Business Education Department, Milton Hershey High, Hershey, Pa.

THE CULINARY INSTITUTE OF AMERICA

—a gravy train to good jobs



Students turn out a day's production of bread and rolls—to be eaten at the noon meal. Later, a chef-instructor will evaluate them for the benefit of learners.

THE BELIEF that the nation's professional kitchens are the sole and indisputable domain of the dashing, mustachioed, pleat-hatted French Chef is as antiquated today as yesterday's little red school house or the absence of modern vocational counseling. In fact, the field of cuisine is becoming more and more Americanized, and the day is not far off, perhaps, when a French accent in the kitchens of our foremost hotels and restaurants will be little more than a sentimental memory.

This has all come about for several good reasons. The traditional European-born and trained chefs are becoming extinct on our shores. Stricter immigration laws make it more difficult for them to come to the United States, and those whose names and reputations are synonymous with good eating are preparing to exchange the rattle of pots and pans for the quiet of retirement. As a result, young American-schooled chefs are climbing aboard a "gravy" train for a quick trip to financially rewarding careers, and throughout the land Peter and Jack are donning the aprons being doffed by Pierre and Jacques.

One of the chief reasons, however, for the upswing in the popularity of "cooking" as a profession is centered in three Victorian mansions which sprawl among 10 acres of green lawns in New Haven, Conn. For it is here that the Culinary Institute of America has its home and where, since 1947, more than 1900 students have graduated into top culinary jobs in major U. S. hotels and restaurants.

The Culinary Institute is a nonprofit, full-time school staffed by some of the finest Master Chefs in the profession, and since its organization 11 years ago by Mrs. Frances Roth, it has faithfully followed two primary aims.

- To offer serious-minded young students the best culinary training obtainable anywhere in the country, thereby preparing them to fill key positions in the hotel-restaurant industry.
- To help raise culinary standards in the United States and to advance the prestige of those who are working in the profession.

BECAUSE of her reputation for getting things done, a group of New Haven restaurateurs, soon after World War II, went to Mrs. Roth—a lawyer by profession and a former prosecuting attorney for the New Haven City Court—with a problem and a plan of action. It all boiled down to this: a lack of qualified chefs to fill local jobs and the availability of a group of Connecticut veterans who were eager to enter chef training. The restaurateurs suggested that she organize a school.

Mrs. Roth responded, and after being assured by the Connecticut

The employment outlook is bright in the culinary arts

Department of Education and the Veterans Administration that the school would be eligible to receive students under the G.I. Bill provisions, the Institute was opened to its first class. It totaled 50 young men who were accommodated in rented rooms on the second floor of a New Haven loft. A few years ago the school changed neighborhoods, a relocation made possible through gifts and donations, and is now a next-door neighbor to Yale University.

The present student body numbers 221 members representing a majority of the states, Hawaii, and Canada. Most are recent high school graduates, a group of them entering the Institute via Army, Navy and Air Force kitchens.

Chef-Instructor Louis Bartenbach offers some helpful hints to a student mixing ingredients for a salad

THE SCHOOL'S two-year curriculum is split in half—a basic course the first year, an advance course the second. Students like to refer to these semesters, however, as the Junior and Senior years. They boast that they attend one of the few schools in the country where they don't have to be Freshmen and can enter with advanced standing!

A student who has completed the basic course has learned to prepare nearly 50 different seven-course menus and has mastered such companion operations as nutrition, food inventory and cost control, kitchen safety, service, and sanitation. He has also received instruction in business English, innkeepers' law, contracts, and insurance practice.

The advance student continues to accumulate additional menus, and the Chef-Instructors encourage the student to develop his creative abilities. In addition to learning to be a "roundsman" (capable of handling several kitchen stations), he is also schooled as a baker, garde manager (canapes and buffets), saucier, salad chef, and sous chef (assistant to the executive chef).

Each school year is 36-weeks in length for which the student pays a $1,000 tuition plus $300 to defray dormitory, uniform, and texts costs. The student's day begins with breakfast at 7:00 am and is followed by classroom and kitchen instruction leading to the preparation of the noon meal. During afternoon sessions, there is further class work and an evaluation of that day's luncheon by the Chef-Instructors.

The school day ends at 3:00 pm, and a tide of white-suited students flows into the dorms for a quick change, then ebbs from the campus to part-time jobs in and around New Haven. At least 90 percent of the students work their way through school earning from $40 to $60 weekly as part-time cooks.

FOR STUDENTS who do not remain at the Institute for the full two-year stint, there are still ample employment plums available. Graduates of the basic course are in great demand among hotel-restaurant men and industrial feeders, and they command excellent salaries—equal in many cases with those given regular 4-year college graduates.

Second-year Institute grads, equipped with a number of specialties, are whisked away by hotel, restaurant, and industry scouts almost as soon as the boys can pack up their diplomas. It is from this group that many of tomorrow's executive chefs will be recruited . . . chefs whose culinary know-how will earn them top, multi-thousand dollar salaries.

THIS INDUSTRY-WIDE support is evidenced by the growing number of scholarships being awarded promising students by the nation's foremost food, beverage, and hotel-restaurant businesses. Faith in the school is reflected, too, in the gifts of equipment by such leaders as Waring, General Foods, and Hotpoint.

How does lawyer Roth feel about her role as educator? "It's been one of the toughest jobs I ever tackled," she admits, "but it's given me the greatest pleasure.

"We've helped to open up an entirely new vocational world for these youngsters," Mrs. Roth beams, "and at the same time we are succeeding in eliminating some of the chef shortage."

Ask anyone in the business how successful Mrs. Roth's school has been in meeting their needs, and they'll agree that without the vocational training the Institute offers, the field of American cuisine would be in serious trouble, suffering from old age and a lack of vitality.

All in all, the outlook couldn't be much brighter for young people choosing a career in the culinary arts. American cuisine hasn't nearly reached its full growth, and the Culinary Institute of America will continue to grow with it.

THE *VOCATIONALLY* TALENTED PUPIL

By Franklin J. Keller

TODAY THE GIFTED child is the darling of the educational gods. All around us we hear, "We are neglecting the gifted child. Let's not cheat the gifted child out of his heritage. He deserves just as much special treatment as the dull child, the physically handicapped child, or the blatant delinquent." Which is all too true. Every academic principal, every superintendent, every president of a board of education is huddling into a conference with his staff on how to save the young genius from the common man and the country from Russian scholarship. In the meanwhile, teachers, principals and directors of vocational schools are still manning the defenses of the reputed national "dumping ground" and deploring the lack of perspicacity of the "peepul".

Meanwhile the books on the gifted child keep popping from the presses. DeHaan and Havighurst write a remarkably fine book on *Educating Gifted Children* except that vocational education doesn't even appear in the index. The National Society for the Study of Education gets out a yearbook on gifted children without a nod to vocational education and another yearbook on *Education for the Gifted* ignores vocational education except for a section on cooperative education in the colleges.

Willard Abraham, an astute and kindly educator, writes *Common Sense About Gifted Children* with reference to vocational guidance but none at all to vocational education. However, he does give a couple of pages to the National Scholarship Service and Fund for Negro Students, and makes reference, without naming or explaining it, to community talent search. Actually community talent search (under the aegis of NSSFNS) is concerned with the talents—all talents—of culturally deprived, economically low-level youngsters with any IQ but with discernibly potential talents for congenial, profitable and socially beneficial work—all this without reference to race, color or creed. Nor do any of these books even make passing mention of the brilliantly endowed mechanical, technical, agricultural, and commercial persons whose talents have shone without benefit of IQ but as a result of first rate vocational education.

SO MUCH for gloom. On the brighter side, on the gleamingly shining side, we have the Conant study. On his return after four years as Ambassador to Germany, James Bryant Conant, former president of Harvard University, set out to discover, with the aid of a $350,000 Carnegie Corporation grant and a staff of three high school principals and a college professor, whether it was possible to do a good job for all kinds of students in the comprehensive high school.

Picking 50 comprehensive high schools in small towns and cities—schools that were apparently doing good jobs because their graduates were doing well in colleges—he studied them in a search for the keys to their success. The surveys took him into seventeen states. Members of his staff covered another fifty schools.[1]

Dr. Conant knows that some critics have been demanding the abolition of vocational courses as well as some of the other elective "frills," but he says, "Not on your life." It is because of these very vocational courses in comprehensive high schools that students are "committed and see purpose." In fact, for Dr. Conant the word "committed" has become a key word, meaning "interest," "aptitude," "satisfaction," "enjoyment," "absorption," and hence "doing," "performance," "activity"—all of which are essential for learning.

VOCATIONAL education is deeply concerned with life—all of life, life as a continuum, from the first emanations of random (always with at least a tinge of direction and goal) to the seriously purposeful striving of the mature individual. Vocational education makes provision for wide differences in individuals. It assumes democracy. It is deeply concerned with the development of the literate, educated man. A vocation—whether it is called a job, a post, position, pursuit, career, mission, calling, profession, or any other name implying either dignity or odium, if it is part of the world's work, rendering service to others, and is not harmful to health or morals, comes within the purview of vocational education. Vocational education is here concerned with the well-rounded development of competent workers. It is not confined to any restricted area such as "less than college grade," manual labor, or jobs "suited" to those who cannot maintain themselves in an academic school.

"Well rounded," yes, but only in the sense that to specific vocational competence, skill, dexterity, performance are added the social, literary, and spiritual graces that make the whole man. Not the well-roundedness of liberal sans practical arts, but the four-square, forthright roundedness of the scholar and gentleman with a purpose, a goal, and — a vocation!

Vocational education, in its essence, in its stress upon drive, upon creativity, upon honesty, accuracy, responsibility, goes much further to make the pupil a "well-rounded person" than does talk, lecturing, courses in general education. In fact,

Dr. Keller, former Principal of Metropolitan Vocational High School, New York City, is now Project Director, Community Talent Search.

[1] *New York Times, July 20, 1958*

The Quest for Talent is Exciting and Elusive

the general course pupil would learn much more about "well-roundedness" by taking some vocational work than would the vocational pupil by taking courses in general education. Of course, there must be balance and each can learn from the other, but it is not necessary to reduce the amount of vocational work or lengthen the day to accomplish these results.

All this calls for interest, aptitude, and finally — talent; not giftedness measured by the IQ, the facility with symbols and abstractions, but the dexterity with social, physical, manual actions, the bent for creativity, the skill for the exercise of practical, humanistic, and human intelligence—in other words, for talent.

THE QUEST for talent is as exciting as it is elusive. The gifted IQ may soar into the intellectual empyrean without flaunting even a dubious talent. Among those whose neglected talents and interests are not discovered in their early years may lurk a Darwin, a Linnaeus, a Patrick Henry, an Isaac Newton, a Samuel Johnson, a George Eliot, a Wagner, a Goethe, a Pasteur,—Daniel Webster, John Adams, Gladstone, Coleridge, James Watt, David Hume, Herbert Spencer, Pierre Curie, Ibsen, Froebel, Albert Einstein, even a Winston Churchill—all of whom were misfits in school. The current results from Community Talent Search supply strong evidence of the contention that high talents lurk among medium IQ's. In the New York City experiment it is already apparent that from among deprived youngsters from low-level economic homes, four times as many will be eligible for admission to college, and will sustain themselves in college, as did so before an intensive C.T.S. experiment was begun.

The approach involves digging down deeper than is customary to spot talented youngsters in their early formative years, then providing them with necessary compensatory services. Ordinarily talent can be identified through the use of standardized tests of academic aptitude and achievement. These tests, however, usually underestimate the potential ability of children who have been deprived of the motivation of books, magazines, newspapers, as well as of the cultural academic, and occupational experiences of their parents. Therefore, in addition to the usual tests of verbal and quantitative aptitude and school achievement—normally valid predictions of academic ability — observation, teacher judgment, non-verbal tests, projective techniques and attitude scales must also be used. Though these are new-old techniques applying them to these severely under-privileged groups is experimental. They will be tested for validity over a period of several years, along with entirely new techniques, such as new approaches to culture-fair tests.[2]

Now, suppose that this technique were added to that of the highly effective exploratory shop courses in the best junior high schools and often in the first year of the senior vocational high schools. Suppose that these vocational high schools also offered 15 hours of college preparatory courses in addition to the usual 15 hours of shop work. Would not a vastly larger number of boys and girls (and their parents, too) be attracted to the kind of school that not only gives exploratory experience and sound training in the most important occupations; guarantees the best known techniques for searching out hidden talents, but also qualifies every pupil for as much further education as he can take, even for college and university? This is my proposal for the potentially talented boy or girl. However it needs considerable study and the AVA Executive Committee has agreed to the organization of a special committee to consolidate the various approaches already made by the Association and to explore further possibilities. There are many considerations a few of which should be mentioned here. For instance:

FOR MANY years vocational education, as defined by the Smith-Hughes Law, has been concerned with education of "less than college grade." However, in recent years there has been a rapid change in emphasis.

In the West, junior colleges, while giving considerable attention to the teaching of occupations, are *not* terminal institutions. A majority of their students are "transfer students," which mean that they want all the preparation necessary for transfer to a four-year institution where they may complete their college work. The junior colleges are public schools and therefore do not charge tuition. The opportunities for young people in California are thus much greater than in those states where there are few or no junior colleges of this kind. The junior college can be a most important stage in the career of a college bound student.

In New York State the community colleges are set up on a somewhat different basis, but they are definitely institutions for "advanced education" in occupations. What is their relation to the vocational high school? At the present moment the University of New Brunswick in Fredericton is negotiating with the Provincial Department of Education for the crediting and admission of vocational teachers to the university and for the teaching of vocational subjects in the university. No decisions have yet been made, but the will is there. Vocational educators are realizing that, as a result of many changing factors in social and economic life, people generally are not satisfied with vocational high schools as terminal institutions. At the AVA Convention it was emphasized that interest, aptitude, and ability, as applied to occupations, whether they are called jobs, positions, or professions, are of the utmost importance in any counseling program. Also the continuum, ranging from the crudest of hand skills to the highest of theoretical and technical knowledge and activity, must constitute the substance of secondary education. Therefore, for any high school to set up a curriculum that does not prepare for higher education those who have ability to sustain themselves in it, cannot be useful to American youth and will not be supported by the American people. In other words, as we would say, in any group, regardless of socio-economic level, of previous academic accomplishment, in fact regardless of anything but the characteristics and

[2] See NSSFNS publications: *Community Talent Search*, First Year's Report, June 30, 1958. *Community Talent Search*, a descriptive brochure. *Blueprint for Talent Searching*, pp. 19-30.

The Peace of the People Rests Upon the Work of the World

abilities of each individual, education should provide all that will develop that individual to his highest capacity. These are attempts to overcome one of those time lags that have always existed, but which, with insight, foresight, and good will, finally enable education to catch up with social needs.

One of the underlying needs for a consideration of this whole problem is the ever-present welfare of each individual personality in terms of his interests, aptitudes and capacities. The other need is the demand of an ever-intensifying technology. Everybody talks about this just as he talks about the gifted child. But only a little has happened in education. Always that dichotomy gets in the way. Technology means theory, thinking, cause and effect, problem solving on the part of workers. It means the discovery and stimulation of every latent talent in every individual, high-born or low-born, whether that talent lies in industry, agriculture, business, or in the fine or performing arts. In any case, it means education to the top of every individual's capacity.

What are our tasks?

WE MUST explore, as we have never done before, the entire group of vocationally gifted, or better, talented, pupils. We must get away from the less-than-college-grade limitation, from the merely manipulative concept, from the "basic" 3-R idea, from the dumping-ground bugaboo. Rather we must push forward in the conviction that the peace of the people rests upon the work of the world.

WE MUST tease out the potential talents of every boy and girl—all kinds of talents—intellectual, scientific, leadership, creative, artistic, writing, dramatic, musical, mechanical, physical. While, as has recently been said so often, each year 200,000 high school graduates who could go to college do *not* go, there probably are another 200,000 able youngsters who do not go because neither they nor the schools have uncovered their abilities.

WE MUST provide all the content, procedures, tests and other devices of the C.T.S. program as well as the exploratory occupational courses of the most effective junior high schools.

WE MUST do something (it is not clear just what) about vocational education on the college level. Perhaps it could be called the technology of all occupations—the "why" of the "how."

IN THE SMALLER, one-high-school communities we must promote the organization of thoroughly effective comprehensive high schools. In the larger communities we must work for the double-purpose high schools that prepare for both immediate entrance into occupations and for further education on higher and higher levels.

Thus, we can aim toward teaching the whole man for a whole society. There must be equality of opportunity. There must be free association, a common goal. People must work together. They must believe in each others' work because they are serving others and others are serving them. They must be common sharers in the task of making life livable. Vocational education assumes and works upon the principle that every individual is worthy of preparation for an occupation and every occupation is worthy of the individual who pursues it, whether it be manual, intellectual or aesthetic, thus arriving at the "dignity of labor" by action rather than preachment. Whatever may be the dominant drive that impels one to seek an education, there is always the possibility of an approach on two fronts, the utilitarian and the cultural, or better, on one front that makes a culture of occupation and an occupation of culture.

Most people would agree on how a mature person should act in a scientific age, but they would disagree on the knowledge that should be put into his head and how it should be put there—in other words, about subject matter and methods in education. For centuries we took work as we found it. By learning what kind of work we like, pursuing and advancing in it intelligently, we may even beat the technological age. Obviously, the "good life" is neither mere drudgery nor all play, but a combination of both; so preparation for the good life—education—must comprehend both. Since vocation is a part of living, vocational education can well be the integrating principle. And the integrating principle of vocational education must necessarily be purpose, goal, end. Every boy or girl should be a young man or woman going somewhere. They should be free youth in the grip of rich and fruitful education.[3]

[3] Franklin J. Keller, *The Double-Purpose High School,* Harper and Brothers, 1953, N. Y.

NEW DEVELOPMENTS IN BOOKKEEPING

(Continued from page 18)

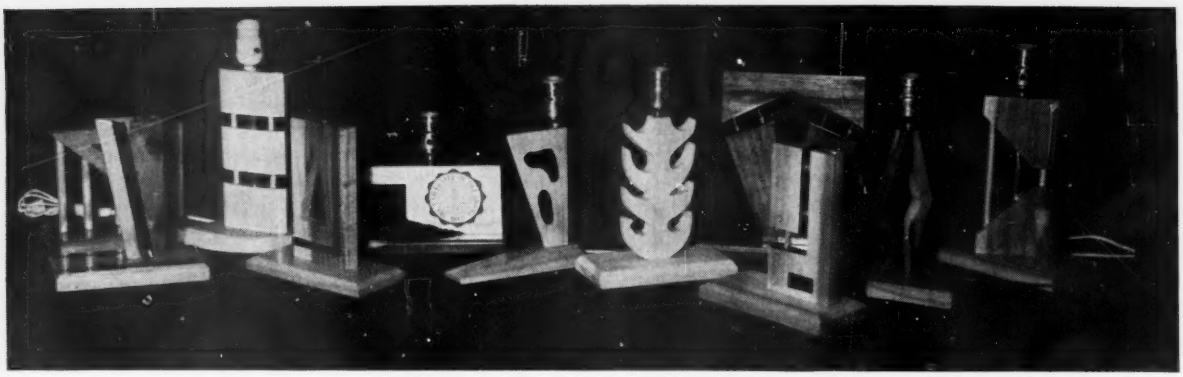
the wise use of color, by the use of arrows, proper spacing, and by the use of notations, even the present illustrations take on new meaning.

THE ELECTRONIC Age is here to stay. There are a variety of machines on the market, from the small autograph register to the Univac. In order for us, as bookkeeping teachers, to get along in this era of machines we must teach students more from the point of view of what accounting data can accomplish. Students should be shown what information the administration can receive and how quickly it can be compiled through the use of automation.

It appears that two types of workers will be needed in the field of automation. First, feeders or processors —these will be high school graduates trained to feed the information into the machines. Second, programmers or analysts—these will be college graduates with the ability to decide what goes into the machines and the ability to interpret the results.

J. H. Preston, Editor of *Systems for Educators* issued the following challenge to business education in a 1955 issue of that magazine:

"It's high time for educators to be aware of this fact: Within a very few years, present-day business teaching curricula may well be outmoded. Graduates of these business courses may well find that they are ill-equipped and ill-prepared to meet the demands of a new era in American business—the electronic age."



a functional approach to teaching

INDUSTRIAL ARTS DESIGN

By Robert A. Hardin

AN EXAMINATION of industrial arts teacher education curricula would probably show that most of them include a course in industrial arts design. A further examination of the shop course outlines would undoubtedly reveal that few of them attempt to correlate design with shop practices.

Design must be regarded as a basic concept in industrial arts education, and as such, organization of its precepts must begin with the first course in the industrial arts curriculum and continue throughout the student's experiences, in the planned sequence of courses.

After many years of experience in teaching separate courses in shop work and in design, the growing conviction that desired goals in industrial arts design cannot be attained in a "one shot" course in design has resulted in a new look at the teaching of design in the Department of Industrial Education at the University of Oklahoma. Action research in exploring new approaches in teaching design are yielding enchantingly delightful results, while at the same time, no observable de-emphasis on shop project activity is noted.

Robert Hardin is Professor of Industrial Education, University of Oklahoma.

Release from imposed restraints unveils hidden possibilities

IT HAS been generally supposed that beginning students in industrial arts have no background for design, but thinking that release from some of the outwardly imposed restraints might unveil hidden capabilities, students in last year's hand woodwork course were permitted free expression in the design of projects. The first day students met they were told that their first project would be to make a lamp, and for its construction each student would be given two pieces of magnolia, to be finished ⅞"x4"x8". This information was not received with much enthusiasm since they immediately envisioned something that was only an exercise, to be discarded when completed. But it was explained that a lamp so simply constructed would be most unattractive and, therefore, not acceptable. Each student was asked to take his pencil and paper, when at home that evening, and try several free hand sketches, experimentally changing the shape of the pieces of wood in any way. The resulting drawings did not reveal any outstanding ability in free hand sketching but they did reveal originality in thinking.

After the sketches were examined, each student (with the help of the instructor when necessary) selected his best design and began bringing it to life in wood. As was to be expected, varying degrees of skill in construction were noted but the lamps were their own all the way, not something taken from a book or dictated, and the results of this excursion into free expression were surprising and delightfully encouraging. No purely abstract designs were produced, and there were no attempts to combine the function of a lamp with other functions such as pencil holder or ash tray. The students had been instructed that the purpose of a lamp is to furnish light, not to be an all around utility, and that the only rule to follow in planning one is "form follows function." How well this was adhered to may be seen in the accompanying photographs.

HOW AN ACTION RESEARCH VENTURE BECAME A CONTINUING PROJECT

It is well known that one does not design without some sort of background of ideas. Since all students have seen lamps in their homes, in stores and in magazines, this project was within their design capabilities. Had they been asked, at this time, to design a lamp to be placed in the United Nations building, the project would have been educationally unsound since few, if any of them, have seen the environs for which such a design would be intended.

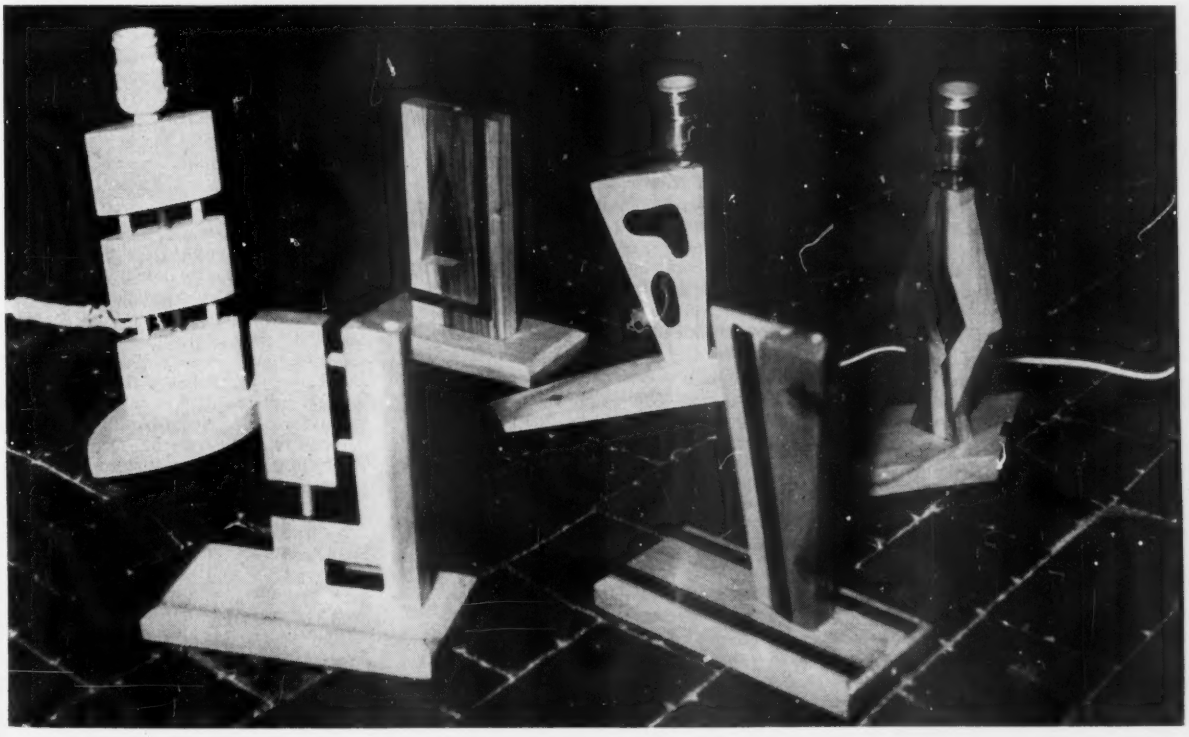
ONE OF our mistakes has been failure to permit students to design and make things within their capabilities. In our action research venture, which by the way, will be a continuing project, students began design on an article for which they had some background of information.

The second project was selected from a book, but with this difference: it was re-designed to make improvements in appearance. Again, the results proved the educational value of this approach. Students were told they could have guided free choice of the third project, with only two stipulations; it could not be copied from a book but had to be designed or redesigned by them; and, it had to be something they could add to their store of ideas for junior high school teaching. Students continued to design their projects for the remainder of the hand woodworking course. They were not permitted to copy anything directly from a drawing. It may be that this requirement is too stringent but it will, for the present, be an essential part of our action research program.

Instruction in the rules of design did not precede the students' work. Results have vindicated this approach. Many of the designs which have been produced are excellent examples of proper application of design fundamentals. *After* the projects were completed there was some discussion as to why they were pleasing to look at. The rules of design then evolved as a natural result of their thought processes rather than being an obstacle imposed from without.

A BOOST of inestimable value to industrial arts teachers could be made if a dozen or more progressive teachers would attempt action research activities in which as many different approaches are made in the teaching of design. Published results of such research activities should serve to encourage all of us to try new ways of teaching this important part of industrial arts education.

It is a mistake, states Prof. Hardin, to fail to allow students to design and make things within their capabilities. Examples of lamps his students successfully designed and made are illustrated here.



From the US Office

Johnie Christian, Program Specialist, Home Economics Education Branch, was the main speaker at the annual fall meeting of the Home Economics Section of the Northwest Ohio Education Association in Toledo, Oct. 24.

* * *

Mary S. Resh, Program Specialist, Trade and Industrial Education Branch, was guest speaker at a meeting of the Business-Industry Section, National Science Teachers Association, in New York City, Nov. 25. The subject of her address was *Widening Horizons for Vocational Education in a Space Age.* The Business-Industry Section is composed of representative of some 100 business and industrial concerns with educational departments interested in developing useful materials for training skilled personnel for business and industry.

* * *

Dr. George L. O'Kelley, Jr., Specialist in Teacher Training and Research for Agricultural Education, resigned from the Agricultural Education Branch in September and returned to the University of Georgia to resume his former position as Professor of Agricultural Education. Dr. O'Kelley began service with the U. S. Office of Education in June 1957.

* * *

Vocational-Technical Education for American Industry, Circular No. 530, has recently been published. It was prepared by Dr. Lynn A. Emerson, Consultant, Division of Vocational Education. Included is information which will be valuable in the further development of vocational education programs.

* * *

The Story of DE, a new film produced by the Sears Roebuck Foundation in cooperation with AVA, depicts distributive education in action at the high school level. Recently reviewed by staff members of the Vocational Education Division of the Office of Education, it was shown for the first time at the AVA Convention in Buffalo. The film is available for educational purposes on a loan basis from Modern Talking Pictures, New York City.

* * *

Mrs. Vera P. Hansel, Chief, Practical Nurse Education Section, was a program speaker at workshops sponsored by the Missouri Hospital Association and the Missouri League for Nursing in Kansas City and St. Louis, September 22 and 23. She presented *Basic Training of the Practical Nurse to Serve as Part of the Team in Caring for Chronic and Geriartric Patients.* In October she participated in several meetings of the National Federation of Licensed Practical Nurses in Providence, Rhode Island. She served as leader at the Federation's Leadership Conference, October 1 through 4; as a member of its Advisory Council which met October 5 and 6; and as speaker during the convention October 7 through 10.

* * *

Rua Van Horn, a member of the Home Economics Education Branch staff since 1935, resigned on July 31 to take a position as Country Adviser in Pakistan for the Oklahoma-Pakistan Technical and Home Economics Projects Program under the sponsorship of Oklahoma State University and financed by the Ford Foundation. Miss Van Horn will assist in the development of the home economics teacher training program in three universities of Pakistan, coordinating the work of five American home economists and their counterparts in the Pakistan universities and the Ministry of Education. During the 23 years that she was a member of the Office of Education staff, Miss Van Horn served as Program Specialist in home economics education in the Southern, Central and Pacific regions. Her able leadership in vocational education will be greatly missed.

* * *

John P. Walsh and Mary S. Resh, Trade and Industrial Education Branch, partipated in the 13th Annual Conference of the National Council on Hotel and Restaurant Education held at Fort Lee, Virginia, October 24-26. Hosts for the Conference were the Quartermaster General, U. S. Army, and the Commanding General of the Quartermaster Training Command. In attendance were Council members, personnel and training directors from the hotel and restaurant industry, representatives of the trade press, chef instructors, and school and college administrators. They discussed new training techniques and materials, career opportunities, and technological changes that are affecting quantity feeding. Mr. Walsh served as moderator of a panel on *Facilitating the Exchange of Information, Materials, and Findings of Research in the Foods Field.* Mary S. Resh is Vice-President of the Council.

* * *

At the Practical Nurse Education workshop held in Salt Lake City, Utah, October 1-5, Barbara R. Fallon, Program Specialist, Practical Nurse Education Section, delivered an address on *The Role of the Instructor as Teacher and Supervisor in a Dynamic Learning Situation.* During a similar workshop in Jefferson City, Missouri, October 19-22, she served as moderator for a panel discussion on *Criteria for Selection of Students,* and also spoke on *Evaluation of Practical Nurse Education Programs.* The following week Miss Fallon attended the Michigan Workshop on Practical Nurse Education held at East Lansing, October 22-25, when her presentation topic was *Nursing Centered Teaching.*

* * *

The publication "Home Economics in Degree-Granting Institutions," Misc. 2557, Rev. 1958, was issued in September. Prepared by Virginia Thomas, Research Assistant in the Home Economics Education Branch, it includes information concerning enrollments, faculties, offerings, and degrees granted in 447 institutions.

* * *

John A. Beaumont, Director, Distributive Education Branch, participated in the DECA Board of Trustees meetings held October 28-30 at the Motor House in Williamsburg, Virginia. Joint sessions were also held with the National Advisory Board.

* * *

A new bulletin has been prepared by the Distributive Education Branch titled *Management Training for Small Business.* It presents a description of courses offered in selected geographical areas. It describes methods of organization, promotion and selection of content. The bulletin is designed as a guide to the establishment of courses for small businessmen.

* * *

Mildred Reel, Assistant National FHA Adviser, and Elaine Rossman, FHA member from Jenera, Ohio, attended the youth sessions of the National Safety Congress, held in Chicago October 20 through 23. As a member of the Youth Planning Committee, Elaine Rossman presided at several sessions and Miss Reel served as Adviser for the home safety sessions. About 15 Future Homemakers from Illinois, Ohio, and Missouri attended the meetings and participated with youth from other organizations in developing plans to encourage home safety practices.

* * *

Two consultants will join the staff of the Distributive Education Branch to perform certain needed specialized professional services until June 30, 1959. Edwin L. Nelson, on leave from his position as State Supervisor of Distributive Education in Iowa will be concerned with studies on curriculum development, and will give special attention to related instruction for cooperative part time students. Mary Virginia Marks, who is Head, Department of Distributive Education at the Richmond Professional Institute of the College of William and Mary in Virginia, will specialize in the field of teacher education in distributive education.

* * *

Edna P. Amidon, Director, and Mildred Weigley Wood, Special Consultant, Home Economics Education Branch, participated in a conference of National Agency Executives, held in New York in October. The conference was arranged by the American Social Hygiene Association and was devoted to considerations of deeper cooperation between schools and the various community organizations in the areas of education for personal and family living. Miss Amidon represented the Department of Health, Education and Welfare at the conference.

* * *

A teacher's manual, "Quantity Food Preparation—A Curriculum Guide," is now available and may be obtained from the Trade and Industrial Education Branch. Through the interest and cooperation of specialists in hotel and restaurant education, this publication was prepared to meet long-felt need for assistance in the training of personnel for quantity

food preparation. The Guide deals with care and operation of kitchen equipment; basic principles of food preparation; science, mathematics, and English related to food preparation; and safety instruction. The suggested content for each section of the Guide has been classified into essential learnings, scope of instruction, and technical and related information. Earl M. Bowler and Mary S. Resh coordinated the project.

* * *

Six national officers represented the Future Homemakers and New Homemakers of America at the 13th National Conference on Citizenship held in Washington, D. C., September 16-19. As youth delegates, they attended all sessions and participated in discussion groups to gain ideas on *Citizenship in a Changing World,* the theme of the Conference. They expect to share these ideas through articles in their national magazines, *Teen Times* and *Chatter Box,* and in programs developed for their coming national conventions. Ruthanna Russel, Editor and Director of Public Relations from the national headquarters staff, also attended the conference.

* * *

During the first week of November, Beulah I. Coon, Home Economics Education Branch, was at Southwestern Louisiana Institute at Lafayette, to work with the college administrators, home economics staff, and State Supervisors of Home Economics on a study of the undergraduate and graduate programs in home economics.

* * *

The Division was host to about 85 visiting vocational education teachers and supervisors from other countries early in the fall. In a special program prepared for this group who are in this country under the auspices of the U. S. Department of State, a general symposium was conducted by six members of the Vocational Education Division staff on the Federal-State Cooperative Program of Vocational Education. In other sessions of the day-and-a-half-long presentation, 12 additional members of the staff, either in panels or in personal presentations, provided our guests with information on the preparation of teachers and adult education, and responded to inquiries about particular areas of interest in the program. In addition, foreign visitors referred to the Vocational Division by other Departments of Government were: 20 men representing farm organizations in India, others from Yugoslavia who are here to study extension education, representatives of Sweden and Egypt interested in home economics in high schools and colleges.

* * *

Mildred Reel, Assistant National Adviser, Future Homemakers of America, attended a meeting of the National Social Welfare Assembly in New York on October 1. The meeting considered future proposals for working with youth. This was a follow-up meeting of an Assembly session on youth and community events held last May for 60 teen-age leaders.

Muriel McFarland, Professor, Home Economics Education, Purdue University, Lafayette, Ind., and Mildred Weigley Wood, formerly Consultant in Family Living Education, Phoenix Union High Schools and College Program, Phoenix, Ariz., have joined the Home Economics Education Branch staff for approximately three months each. They will serve as consultants for special projects to be undertaken by the Branch.

* * *

Lois Oliver, National Adviser of the Future Homemakers of America, addressed the opening session of the California State FHA Association annual meeting on the topic *You Are A Teen With A Purpose.* Following the meeting held in Asilomar, Calif., October 17-19, Miss Oliver did field work throughout the state.

* * *

The program of the Illinois Conference of Local Supervisors and State Staff on October 5-7 included several presentations by John P. Walsh, Director, Trade and Industrial Education Branch. His first talk was on *'Major Criticisms of Education and Their Implications for Change in Trade and Industrial Education.'* He also discussed *'Post High School Technical Education'* and *'Looking Ahead to Problems and Issues Affecting Trade and Industrial Education.'*

* * *

Selma Lippeatt has resigned from the staff of the Home Economics Education Branch to assume the post of Dean of the College of Home Economics at the University of Maryland. In January 1956, Dr. Lippeatt came to the Office of Education from the Home Economics supervisory staff of the Arkansas State Department of Education. While with the Office, she served first as Assistant Director of the Home Economics Education Branch, and later as Program Specialist for the Central Region. She gave special attention to the preparation of materials on research and to assisting States in developing research in home economics at State and local levels.

* * *

Plans are being completed for a Conference on Trade and Industrial Education Instructional Materials to be held in Washington, D. C., January 19-23, 1959. Invitations have been extended to persons actively engaged in the development and production of instructional materials for preparatory and extension students in trade and industrial education classes. Agenda items include consideration of a new format for Miscellany 3243, *'A List of Instructional Materials';* a plan for validating materials prepared for national distribution; and a suggested format for the preparation of instructional materials.

* * *

For several years staff members of the Home Economics Education Branch have been serving as consultants to regional meetings of college teachers of Textiles and Clothing, and Foods and Nutrition. This fall, Beulah I. Coon, Research Specialist, participated in such conferences for the Pacific Region at Las Cruces, New Mexico, and Salt Lake City, Utah. Johnie Christian, Program Specialist, participated in similar meetings held in Chicago for the Central Region.

* * *

"The History of the Practical Nurse *Program and Current Developments in the Curriculum of the One-Year Basic Preparatory Program"* was the subject of a presentation made by Vera P. Hansel, Chief, Practical Nurse Education Section, during the Tennessee Licensed Practical Nurse Association Annual Convention held in Memphis, November 10-14. Mrs. Hansel also participated in a workshop sponsored by the National Association for Practical Nurse Education in Washington, D. C., November 21-23.

WHEN WE ALL GET TOGETHER . . .

By Alton Wright
New Hanover High School
Wilmington, N. C.

When we all get together the atmosphere seems to clear. Muddled misunderstandings and misconceptions seem to be much easier to clear away when all the parties concerned are brought together under congenial circumstances.

This is the idea as the distributive education department of New Hanover High School, Wilmington, N. C., holds its annual "Get-Acquainted Meeting." Held early in the school year for all DE students, their parents, their employer-trainers, and school officials, its purpose is to promote better understanding of the role of each group in the distributive education program.

The program itself has always varied. In 1955 a panel was made up of a high school DE student, a former DE student enrolled in college, and a former DE student who was manager of a department within a large store. These three people discussed the distributive education program from the standpoints of *Why I Chose the Two Year Program, A DE Student Can Go to College!* and *How DE Helped Me.*

The next year saw a panel made up of a personnel manager representing the business viewpoint of DE; a community leader discussing DE's values to the community; a DE student telling what the program meant to her; and the school principal describing the place DE occupies in the overall school program.

In 1957 two films from other areas, Virginia and New Orleans, were used to give a broader picture of DE. The local differences and likenesses were pointed out by both DE students and the coordinator.

An explanation of the DE program with emphasis on the club work was offered in 1958. An initiation ceremony bringing new members into the club was held.

This Get-Acquainted-Meeting has been of great value to all parties concerned. Many parents meet the coordinator and employer-trainers for the first time. Employer-trainers often go away realizing all the more that DE is a real training program.

Around the Nation—

AMERICAN TECH PUBLISHES JOHN FUZAK'S PRIZE-WINNING RESEARCH

American Technical Society has just published John A. Fuzak's RESEARCH REPORT, product of a five year study into the learning experiences of more than 500 junior high school students from the city of Lansing, Mich. The study was undertaken to examine the relationship between physical maturation and class performance in beginning industrial arts students.

Mr. Fuzak, Professor of Industrial Education, Michigan State University, has for several years been in the forefront among educators who have realized the need for extending the goals of industrial arts education. His study served a double research function. In addition to investigating an area of critical importance to the effective teaching of industrial arts, it provided valuable experience for student teachers in the use of modern research techniques, as part of the industrial arts teacher-training program at Michigan State University.

Results of the study indicate that the degree of physical maturity attained by beginning shop students is often of primary importance in determining their ability to master the manipulative processes required for successful shop work. In addition, it provides a simple, accurate, and scientific method for teachers to measure physical maturation in beginning students. Complete information on its effective use, and the interpretation of results is included in *Research Report.*

In 1957 Fuzak's *Research Report,* formally entitled *The Role of Physical Maturation in Determining the Ability of Junior High School Boys to Perform Complex Finger Coordinative Activities in Industrial Arts, and an Index to Level of Ability,* received First Award in American Technical Society's Research Awards Program. The program was sponsored by the society in order to stimulate research in industrial education. Winners were selected by the society's editorial advisory board of prominent educators. Also participating in the selection of winners were Gilbert G. Weaver, Chairman, Research and Publications Committee, American Vocational Association, and Dr. Tom A. Lamke, Coordinator of Research and Assistant Dean of Instruction, Iowa State Teachers College.

DE PRACTICES IN LARGE CITIES TO BE SURVEYED

The Pennsylvania State Board for Vocational Education has granted authorization to Temple University to conduct a study of effective practices in metropolitan programs of distributive education in the United States. The research is being conducted by the Educational Service Bureau of Temple University in order to aid the Department of Public Instruction and educational authorities in other states to initiate distributive education programs in large cities. Effective practices in eight areas of interest will be collected: Promotion, Administration, Curriculum, Teaching, Supervising, Coordination, Public Relations, Advisory Committees.

The study will have the benefit of contributions from representatives of the U. S. Office of Education and the Department of Public Instruction in Harrisburg, in addition to the services of staff members of Temple University.

The research was developed by members of the Department of Public Instruction, Harrisburg; representatives of the U. S. Office of Education, the Distributive Education Department of Temple and the Educational Service Bureau, Department of Educational Administration, Temple University.

Greer Plans Opening of Construction Equipment Mechanics School

The 56-year-old Greer Technical Institute that 20 months ago pioneered a school in the Middle West to train earthmoving equipment operators and which has since turned out over 1,000 graduates, will soon pioneer another type of school to train skilled mechanics for the earthmoving industry.

The school, to be inaugurated in Wilmington, Illinois (about 60 miles from Chicago) will require 540 hours and will be spread out over a period of 10 weeks.

Erwin Greer, founder of the school, claims the new training will be the first of its kind offered in the United States.

"We're calling this new course Construction Equipment Mechanics. Our aim is to provide practical and technical training to students to help meet the increasing needs of the construction industry. We have surveyed the industry and find there is a definite lack of skilled and competent manpower required to service and maintain earthmoving equipment."

The course, to run 5½ days per week, 10 hours per day, will include 60 hours instruction in each of the following departments: Diesel engines, fuel injection systems, torque converters, final drives, steering system, tractor tracks, cable controls, welding and bulldozer rebuilding.

Over $100,000 has been spent by Greer to provide modern class rooms and completely equipped shops located in the downtown area of Wilmington, Illinois. All but two of the training programs will be held in this convenient location. The welding and bulldozer rebuilding courses will be held at the Heavy Equipment Operators School at Braidwood, Illinois, just 4 miles away from the site of the new Construction Equipment Mechanics School. It is expected heavy enrollment will come from contractors and distributor organizations representing the various manufacturers of earthmoving equipment.

PENNSYLVANIA COMPLETES DE SURVEY

A comprehensive research survey of distributive education programs in Pennsylvania has been completed by the Graduate School of Retailing, University of Pittsburgh. The research study was authorized by the State Board of Vocational Education from a proposal submitted by Robert T. Stoner, State Director of Vocational Education. Recognizing the need to constantly improve and expand the services of the distributive education program, the study had as its basic objective the development of suitable criteria for administrators and field supervisors who need useful yardsticks for measuring present status and directing future development.

Recommendations contained in the report suggest that overall consideration should be given to a change in the name of the present program. Another important recommendation is that a group of field supervisors be organized to function exclusively in a missionary capacity to insure a greater flow of pertinent information and communications. Greater attention and promotion directed toward communities under 30,000 population is also indicated, as is a carefully planned "follow-through" program for both educators and retailers. These points and others are developed fully in the body of the report.

Pittsburgh School Continues Successful Automation Program

Allegheny High School, Pittsburgh, Pa., was visited for a first hand picture of progress in its special course in automation by a committee headed by Milton Aronson, Editor of *Instruments and Automation* last spring.

The content for the course was developed in 1957. Top level science students from all over Pittsburgh were recruited, a teacher was trained for the job, and a specially equipped laboratory and classroom was set up.

Curricula were evolved from the original concept of automation to what is now essentially a high school exposure in engineering-physics. Students receive a formal lecture from a visiting scientist or engineer from local industry one morning a week and engage in bench experiments with allied equipment to illustrate some of the points.

In this manner the following units have been covered:

Introduction (standards and units of measurements); electricity (matter, electrical effects, signals, time constants); magnetism (fields, loops, amplifiers, gaussmeters, etc.); electronics (tubes, functions, power supplies, solid states, test meters, communications circuits, radar, sonar, etc.); mechanics (displacement meas., velocity, accel., derivatives).

Also, industrial measurement and control (indicators, recorders, controllers, pressure, temperature, flow, humidity, electrochemical, non-destructive testing, acoustics, optics, quality control, materials handling); nuclear physics (mass-energy transforms, detectors, reactors, health); and computing and data analysis (binary math, codes, programming, logic).

API SPONSORS ORIENTATION SERIES

The third and final meeting in a series of orientation sessions to acquaint oil marketers and educators with petroleum's distributive education program drew the attention of 25 marketers and seven educators in Philadelphia, Sept. 30.

The meeting was sponsored by the Division of Marketing of the **American Petroleum Institute.**

E. J. Langham, of Sun Oil Co., Philadelphia, presided and briefed the group on API projects and activities related to distributive education. Others discussing the program were John A. Beaumont, Chief of the Distributive Education Branch of the U. S. Office of Education, Washington, D. C., and Brice Cecil, of the API's marketing headquarters in New York.

Educators, in addition to Beaumont, attending the meeting were Billings Burlingame, Supervisor of Distributive Education in New York; Robert Joy, Supervisor of Distributive Education in New Jersey; Harry Applegate, Executive Secretary, Distributive Education Clubs of America, Washington, D. C.; Herman Lebourtz, teacher-coordinator of distributive education, Olney High School, Philadelphia; Herbert R. Kerchner, teacher-coordinator, Abington High School, Abington, Pa.; and Edward G. Blendon, teacher-coordinator of distributive education, John Bartram High School, Philadelphia.

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The **Nebraska Vocational Association** met at the Nebraska State Trade-Technical School, Milford, September 27. An attendance of 215 heard Dr. H. H. London speak on manpower problems in America.

One of the highlights of the program was a conducted tour of vocational sections of the trade-technical school. State Director of Vocational Education Cecil E. Stanley reports that "as a result, many of our vocational teachers have a much clearer concept of the purposes, objectives and accomplishments of a trade training program on an area school basis."

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Francis Miller, center, points out one of the charts available to all Ohio vocational teachers to State Director, Ralph A. Howard and Dr. M. D. Mobley, right. This series of charts shows the relationship between employment and preparation for employment in Ohio.

The Nebraska Vocational Association met at the Nebraska State Trade-Technical School Sept. 27.

E. T. Barnett, President of the San Joaquin Chapter, **California Industrial Education Association,** and state planning chairman for the CIEA's state convention scheduled for Stockton March 13 and 14 reports that plans are well under way for the annual event.

Other chairmen include John Wittsche, exhibits; Jay Gibson, program; John Strangman, housing and meals; William Stockwell, registration; Leslie Davis and John Adamson, printing and publicity.

Also, Frank T. Jacobs, William Mariano, Robert Jennings and Merle Cassilis.

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The **Virginia Vocational Association's** annual luncheon meeting was held October 31 at the John Marshall Hotel in Richmond. K. A. Schneider was master of ceremonies. President Noble Moore was in charge of the business meeting.

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Keeping Pace with the Missile Age was the theme of the **Ohio Vocational Association's** annual convention, held in Columbus September 26-27.

The main banquet address was presented by AVA Executive Secretary Dr. M. D. Mobley.

Members of the planning committee included Emil J. Lisak, Chairman; Beulah Sellers; H. C. Horstman; John Barton; Carlton Sherrick; Kenneth Green (OVA President; and Dr. Ralph J. Woodin (Executive Secretary).

AVA President-Elect Dr. H. H. London will be the featured speaker at the annual meeting of the **Missouri Vocational Association,** Kansas City, November 16. Both Dr. London and AVA Executive Secretary Dr. M. D. Mobley addressed sessions of the **Minnesota Vocational Association** Convention in October.

NEWLY ELECTED STATE OFFICERS

Nebraska (Homemaking): **Mrs. Janet** Meyer, Aurora, President; Marian Janda, Stromsburg, Vice President; Marjorie Rolofson, Stanton, Secretary; Mrs. Fern Medlin, Albion, Treasurer.

Nevada (Vocational Teachers): Mrs. Alice Cooper, Yerington, President; Mrs. Ruth A. Paget, Carson City, Secretary-Treasurer. Vice Presidents: Clifton Hutchens, Las Vegas, T & I; John Caserta, Reno, Distributive; T. R. Peddicord, Gardnerville, Agriculture; Mrs. Elsie Colvin, Gardnerville, Home Economics.

Texas: James S. Gupton, Houston, President; F. Jack Konecny, College Station, Secretary-Treasurer; Beryl Hixson, Deciton, President Elect. Vice Presidents: Rainey Owen, Abilene, T & I; Raymond Wilson, Amarillo, Distributive; Thomas L. Devin, Dumas, Agriculture; Dr. Jessie W. Bateman, Lubbock, Homemaking.

West Virginia: Harley W. Calendine, Parkersburg, President; Nellie Cook, Grafton, First Vice President; R. L. Taubert, Clay, Second Vice President, Agriculture; J. Bond Davis, Second Vice President, Distributive; James Pennington, Beckley, Second Vice President, T & I; Edna Stevens, Athens, Second Vice President, Home Economics; Martin Hofstetter, Ansted, Second Vice President, Industrial Arts. Directors: Walter Holden, Salem; Mrs. Marie Kittle, Philippi; W. W. Rose, Clarksburg; Frances Lynch, Buckhannon.

Wisconsin (Rural Homemaking Instructors): Mrs. Dorothy Dunkel, Athens, President; Mrs. Dragica Nerbun, Ladysmith, Secretary-Treasurer. Vice Presidents: Mrs. Elizabeth LeTourneau, Hayward, Northwest; Mrs. Doris Holcomb, Strum, Westcentral; Mrs. Ona Grelie, Prarie du Chien, Southwest; Mrs. Dorothy Olds, Manawa, Northeast; Mrs. Dolores Rieck, Middleton, Southeast.

People

Mrs. J. Merritt Barlow, business teacher at Varina High School, Richmond, Va., has been named the outstanding business teacher of the year in her area by the National Office Management Association's Education Committee.

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Dr. Wilbur P. Ball has been appointed to the teaching staff at Fresno State College, Fresno California. His new assignment will be to head up the teacher education program in General Agriculture in the Agricultural Division of the College under the direction of Dean Lloyd Dowler. For the past two years he served as an Agricultural Education consultant under the United States Government's ICA-Stanford University Contract at the Central Luzon Agricultural College. Nueva Ecija, Philippines.

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Dr. Ralph K. Nair, Associate Professor of Industrial Arts at University of California, Santa Barbara, has accepted an appointment as Assistant Director of Relations With Schools for the state-wide University of California. His appointment was effective July 1st.

Dr. Nair will continue his teaching position in the department of industrial arts, as well as represent the Office of Relations With Schools.

A graduate of Kansas State Teachers College, he received his doctorate from the University of Missouri in 1950. He has been teaching at Santa Barbara since 1941.

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Edna Rahmeyer of Wyoming, Ill., is the newly appointed Illinois State Supervisor of Home Economics Education for the Western District and Assistant State Advisor of the Illinois Association of Future Homemakers of America. Miss Rahmeyer has had 14 years of teaching experience in Illinois and she was the 1955-56 State Sponsor of the Illinois FHA.

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Raymond L. Cornwell, Richard N. Hall, Henry S. Paulin and **Charles W. Phallen** are newly appointed professors on the staff of the industrial arts division faculty at State University Teachers College, Oswego, N. Y.

Mr. Cornwell is associate professor of graphic arts. The other three men are assistant professors of industrial arts.

* * *

Carl Anderwald is the newly-appointed Chairman of AVA's Trade and Industrial Policy and Planning Committee. Byrl Shoemaker, who was incorrectly reported as chairman of this group in the October JOURNAL is the trade and industrial education division's program chairman for the 1959 AVA Convention in Chicago.

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R. E. Naugher and George O'Kelley, of the Agricultural Education Branch staff, attended the 8th Annual Research Conference for supervisors and teacher trainers of agricultural education held in Raleigh, N. C., in September. Discussions included the National Young Farmer Study. Representatives from states in the region were given detailed plans for the procedures to be followed for establishing and developing trial centers during the coming year. A committee of this conference also worked on recommendations regarding the evaluative techniques to be employed in the study.

Jack Reynolds, California Industrial Education Association President, poses with AVA Treasurer Dr. Charles Wy. Sylvester at the Buffalo meeting

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AVA President and Virginia State Supervisor of Agricultural Education, **R. E. Bass** has been appointed Virginia State Director of Vocational Education by the State Board of Education according to an announcement made by Dr. Davis Y. Paschal, State Superintendent of Public Instruction, Oct. 30.

Elevated from Assistant to State Supervisor of Agricultural Education in 1951, Mr. Bass had previously taught vocational agricultural for 10 years. In addition he had served as Assistant State Administrator, NYA; Assistant to the Director, Food Production War Training; Executive Secretary-Treasurer, Virginia FFA; and Editor of Chapter Chats, the state FFA paper. He had a major part in the development of the State FFA-FHA camp.

Reared on a Virginia farm, he holds a BS from VPI (agricultural education) and an M.Ed. in school administration from the University of Virginia.

MRS. WALTER F. GEORGE

Mrs. Walter F. George, widow of Georgia's former Senator, died Oct. 29 of a liver infection. She was 75.

Her husband, famed friend and benefactor of vocational education, passed away in August, 1957.

Known affectionately in Washington and her native state of Georgia as "Miss Lucy," Mrs. George, the daughter of a Georgia merchant, married Mr. George in 1903. They had two sons, Heard F. George of Vienna, Ga., and J. Marcus George, a Navy pilot who was killed in World War II.

PHILIP VAN WYCK

Philip Van Wyck, for the past four years Chief Advisor to Dunwoody Industrial Institute's staff at the Government Technical Institute in Insein, Burma, died unexpectedly October 7 in a Burma hospital.

Mr. Van Wyck had been working in the project sponsored by the Ford Foundation and administered by Dunwoody.

He joined the Dunwoody staff in 1925 and served as head of the Machine and Mechanical drafting departments until 1941 when he entered the service of the U. S. Government as Director of Training for the War Manpower Commission.

FRANK B. CALE

Frank B. Cale, Virginia State Director of Vocational Education died October 1, following an illness of several months. He was 63.

Mr. Cale's entire professional life—40 years—was devoted to public education. A native Virginian and graduate of Virginia Polytechnic Institute, he served in the armed forces during World War I. He began his career in public education as a teacher of vocational agriculture and high school principal in Caroline County. He was appointed Area Supervisor of Vocational Agriculture in 1931, State Supervisor in 1946 and State Director of Vocational Education in 1951.

A life member of AVA, Mr. Cale was the recipient of the Association's outstanding service award in 1955. He had received the honorary State and American Farmer degrees in the Future Farmers of America and held honorary membership in DECA, FHA, FBLA and DO groups. A Past President of the Southern Association of Agricultural Engineering and Vocational Agriculture, he had also been a member of the board of trustees of the Future Farmers of America Foundation and served as a member of the Advisory Committee, U. S. Office of Education.

Throughout his career Mr. Cale served with distinction in every position he held. The significant progress of vocational education in Virginia stands as a tribute to his untiring efforts. He will live on in the hearts and lives of those with whom he worked and who were influenced by his sound, inspiring leadership.

FRED J. SCHMIDT, JR.

Fred J. Schmidt, Jr., Professor and Head of the Industrial Arts Department, Ball State Teachers College, Muncie, Indiana, died of a heart attack October 17.

Dr. Schmidt had been engaged in the administration, supervision and teaching of industrial arts for many years. He earned his BS at Iowa State Teachers College in 1923, his MS at the University of Wisconsin in 1928 and his Ed. D. at Indiana University in 1951. He joined the Ball State Teachers College staff in 1935 and was named to the post he held until his death in 1947.

In his memory, Ball State Teachers College Foundation has established the Fred J. Schmidt, Jr., Memorial Fund. Contributions are accepted through the Development Office, Ball State Teachers College, Muncie, Indiana.

New Books—

for further information, write the American Vocational Journal

Work in the Lives of Married Women, by the National Manpower Council. Columbia University Press, Morningside Heights, New York 27, N. Y., 1958. 220 pages, $4.75.

These proceedings of a conference on womanpower held in 1957 at Columbia University explore the social, economic, psychological and cultural implications of the revolution in women's employment in this century, with contributions by experts and conference discussions.

* * *

Apprenticeships in America, by Harry Kursh. W. W. Norton & Co., Inc., New York, N. Y., 1958.

This first complete book about apprenticeships in America is a guide to golden opportunities in industry for students, parents, counselors and leaders in education, labor and industry. Directories of state and federal apprenticeship agencies are included.

* * *

Personnel Research Frontiers, by Cecil E. Goode. Public Personnel Association, 1313 E. 60th St., Chicago 37, Ill., 1958. 176 pages, $3.50.

This study explores the extent of present research activities and the implications of these activities to improved personnel management in government and wherever people work.

* * *

Dispersion of Materials, by Holt Hammond. Philosophical Library, Inc., 15 East 40th St., New York 16, N. Y., 1958. 230 pages, $10.00.

Prepared for students entering the chemical and chemical engineering industries this book will also serve as a useful reference for experienced chemical engineers, bringing them into touch with up-to-date equipment.

* * *

Soviet Education, edited by George L. Kline. Columbia University Press, 2960 Broadway, New York 27, N. Y., 1957. 192 pages, $3.50.

Nine first hand reports by former Soviet teachers and students provide a unique source of insight into the functioning of the Soviet educational system through the early forties.

* * *

Separation and Purification of Materials, by Holt Hammond. Philosophical Library, Inc., 15 East 40th St., New York 16, N. Y., 1958. 327 pages, $10.00.

Solid-solid, solid-liquid, solid-gas, liquid-liquid, liquid-gas and gas-gas systems are covered here, with a chapter on separation and purification in nuclear engineering. The subject of atmospheric pollution receives attention.

* * *

The Ruble War, by CBS News Correspondents. Economica Books, Smith, Keynes & Marshall, Publishers, 4498 Main St., Buffalo 26, N. Y., 1958. 71 pages, $1.00.

This volume presents an expansion of material used in TV and radio broadcasts resting on accumulated observations and basic research by six authors in more than two dozen countries during 1950-58.

* * *

Automotive Essentials, by Ray F. Kuns. The Bruce Publishing Co., Milwaukee 1, Wis., 1958. 502 pages, $6.50.

An up-to-date edition of a text for the beginner is combined here with a manual for the auto owner who wants to know enough about his car to do an occasional repair job.

* * *

Combating the Dropout Problem, by Charles M. Allen. Science Research Associates, Inc., 57 W. Grand Ave., Chicago 10, Ill., 1956. 48 pages, $1.00.

Here is a handbook for teachers, counselors and administrators in elementary and high schools containing extensive research in the dropout situation with recommended remedies.

* * *

Employment of Older Women, by the Women's Bureau, U. S. Department of Labor, 1957. 83 pages, 30 cents. Order from Superintendent of Documents, Government Printing Office, Washington 25, D. C.

This is an annotated bibliography useful in studying hiring practices, attitudes and work performance of older women in industry.

* * *

Long-Range Planning for Education, edited by Arthur E. Traxler. American Council on Education, 1785 Massachusetts Avenue, Washington 6, D. C., 1958.

The Twenty-second Educational Conference held in New York under the auspices of the Educational Records Bureau and the American Council on Education is reported here. A number of articles by authorities on admissions policies with examples of changing values are featured.

* * *

Wider Than The Sky, by Charles M. Daugherty. Harcourt, Brace and Co., 750 Third Avenue, New York 17, N. Y., 1958. 158 pages, $2.95.

Based on research including interviews with aviation leaders, this study deals with the challenge of space and opens vistas of opportunity in the field.

* * *

Concise International Dictionary of Mechanics and Geology, by S. A. Cooper. Philosophical Library, Inc., 15 East 40th St., New York 16, N. Y., 1958. 400 pages, $6.00.

The purpose of this book is to provide mechanics, engineers and manufacturers with a handy volume of equivalents in French, German, and Spanish for the expressions most frequently occurring in their work.

Local School Construction Programs, by N. E. Viles. Office of Education, Department of Health, Education, and Welfare, Washington, D. C., 1957. Order from Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. 80 pages, 55 cents.

Though not intended as final answers to specific problems in each building program, the suggestions outlined in this booklet provide general guidelines for planning the various steps in school building.

* * *

Special Education Personnel in State Departments of Education. Office of Education, Department of Health, Education, and Welfare, Washington, D. C. Order from Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. 49 pages, 30 cents.

This is a part of a broader study, made possible by many agencies, on the qualification of teachers of exceptional children and the broadening of programs to serve their needs.

* * *

Physicist, by Vernard F. Group. Personnel Services, Inc., Peapack, New Jersey, 1958. 5 pages, 50¢, for students, 25¢.

This occupational abstract is a composite summary of available literature regarding physicists and related occupations.

* * *

Foreign Language Teaching in Illinois, by the Allerton House Conference on Education. Southern Illinois University Press, Carbondale, Ill., 1957. 76 pages, free. Order from Allerton House Conference on Education, 204 Gregory Hall, University of Illinois, Urbana, Ill.

Following the procedure used to gain conference acceptance of group reports, the Study Group on Foreign Languages here details ways in which they believe second language teaching can make its fullest contribution to education.

* * *

Your Opportunities in Industry as a Technician. Education Department, National Association of Manufacturers, 2 East 48th St., New York 17, N. Y., 1957. 31 pages.

This booklet tells how some recent scientific miracles came about and how one can prepare for any one of 50 technical occupations.

* * *

Will Hotel Work be Your Career? American Hotel Association, 221 W. 57th St., New York 19, N. Y. 24 pages.

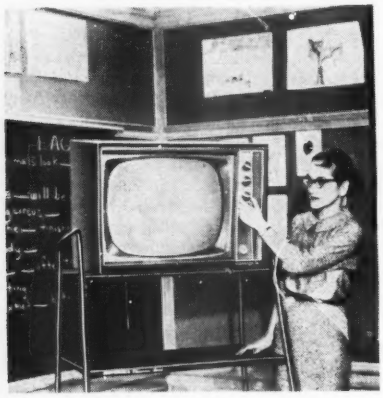
Describing how a hotel is organized, this booklet offers information about opportunities in and desirable qualifications for this field.

* * *

Colleges for Our Land and Time, by Edward Danforth Eddy, Jr. Harper & Brothers, Publishers, 49 East 33rd St., New York, N. Y., 1957. 328 pages, $4.50.

This first general account covers development of the land-grant movement; appears under the auspices of the American Association of Land-Grant Colleges and State Universities.

News from Industry



Allied Radio Corporation, Chicago, announces the release of the new Knight KN-720 "Bantam" Stereo Amplifier. This versatile unit provides 10 watts output per channel, or 20 watts output from educational and commercial stations.

When used in closed-circuit systems, the "Classroom 21" provides a high definition 500 line picture for detailed reproduction of laboratory experiments, microscopic slides, chalkboard illustrations, industrial and fine arts demonstrations, maps and line drawings.

Installation of multiple classroom receivers is simplified by special RF, video, and audio jacks. A front mounted internal speaker assures clear reception, and a separate audio input jack allows use of the unit as a public address speaker for school announcements or classroom lectures. The "Classroom 21" can be instantly changed from high definition closed-circuit operation to over-the-air pickup of local broadcast television stations by operation of a simple switch.

* * *

Action photographs of 42 different woodworking operations that can be performed on a Delta radial saw—everything from cross-cutting, ripping and dadoing to tongue and grooving—illustrate a new 12-page catalog issued by Rockwell Manufacturing Company's **Delta Power Tool Division.**

The two-color catalog describes two Delta radial saws—the 10-inch portable and the all new "Super 900" 9-inch model.

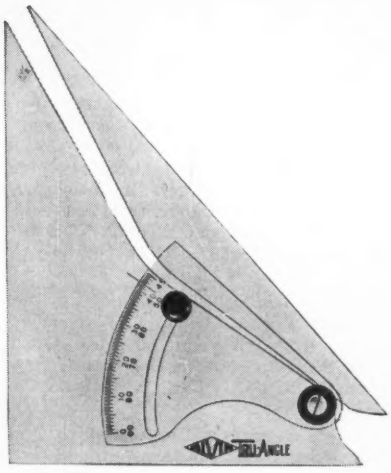
The pictures of tool operations—a total of 85 shots make the catalog a practical educational guide for the contractor interested in reducing costs of both shop and on-the-job cutting; the school setting up, or adding to, a woodworking shop; small industrial establishments engaged in light woodworking; and the maintenance department of any industrial establishment.

The "Super 900," recently unveiled by Delta, features a one-horsepower motor that develops up to two horsepower under load. This new power is said to make it the most powerful radial saw in its class.

The Delta 10-inch radial saw is especially useful to the progressive builder. Ruggedness, industrial capacity, and accuracy are combined with complete portability. Easily moved from job to job, it enables the builder to take advantage of the economies of centralizing cutting to pre-cut an entire structure.

Two pages of the catalog are devoted to accessories which include blades, molding cutters, sanding drums, routing bits, wire brushes, and drilling chucks.

Complete specifications and catalog listings are also included in the new catalog.



Alvin & Company, Inc. offers top quality professional fluorescent protractor triangles that provide for faster, more accurate work. The adjustable triangle is fabricated from clear optical grade Plexiglass which eliminates all distortions. Fluorescent acrylic triangles embody all the qualities of clear acrylic. They reflect an orange tint and have the unique feature of illuminating an orange light from all edges. Beveled protractor edges eliminate any possibility of parallax lines. Material is highly ductile, rigid and shatter-resistant with a thickness of .100 of an inch. Triangles will not darken, discolor, decompose or warp with repeated use.

Alvin's fluorescent adjustable triangles combine the functions of a protractor and a triangle. The right triangle permits drawing of accurate angles from 0° to 90° direct from the base line. The protractor element has two rows of die-sunk graduations: the outer row indicates angles from 0° to 45° from the base; the inner row indicates angles from 45° to 90° from the shorter base, and angles may be set to graduations of one-half degree with assured accuracy. The fulcrum point has an aluminum screw post to insure lasting firm movement. The adjustment arm is held firmly when adjusting to any angle by a knurled knob screw with a metal insert, which also serves as a handle for easy pick-up and rapid manipulating.

This McCormick No. 27 rotary cutter, cutting an 84-inch swath, is one of two new rotary cutters just announced by the **International Harvester Company.** Pto-driven by any two-plow or larger tractor, it is especially adapted to large-area mowing; clipping pastures; shredding cotton and corn stalks; and clearing brushy areas, cutting trees and bushes up to three inches in diameter.

A McCormick No. 28 low-deck rotary cutter with 60-inch cut also has been announced and is available as a two-point Fast-Hitch model for IH tractors, or as a three-point model for use with any two-plow or larger tractor with three-point hitch.

Both cutters have durable, all-steel reinforced housing; free-swinging, reversible, double-edged knives; and built-in safeguards.

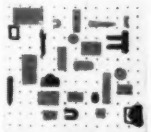
A new type of television receiever especially designed for classroom use has been developed by **Motorola, Inc.,** Chicago. Called the "Classroom 21," it can be used in either closed-circuit television systems or for viewing over-the-air broadcasts when channels are paralleled. It features full control facilities for stereo or monaural operation, DC on preamp fileaments, hum balance control and two AC outlets.

Six-position selector knob has settings for tape head; RIAA, EUR and LP equalization; tuner and auxilliary inputs. Controls include balance and stereo-monaural switch, volume, bass, and treble-on-off power switch. Slide switches for input balance, stereo reverse, rumble and scratch filters. The unit has five pairs of stereo inputs and two tape recorder outputs. Speaker output impedances, 4, 8 and 16 ohms per channel.

Another American Vocational Service: For further information on any of these items, just write to News from Industry, AVA headquarters.

CROW
COURSE #41B

LEARNING BY DOING with Crow's "Introduction To Electricity"



SHOP TEACHERS

"Instant Inventory Board"

Handy wall storage board for Model 41B is included. Shape silhouettes make "cleaning up" after class and storage simple.

LEARNING IS FUN . . . It's an exciting, satisfying experience to the student to actually FEEL himself a part of every experiment! That's why the "Introduction to Electricity" Course has met with such wide acceptance. It puts the student into the act. He performs permanent magnetic experiments THE FIRST DAY, and in this course he actually builds basic AC and DC motors! He UNDERSTANDS THEM because he MAKES THEM!

TEACHING IS FAST . . . and almost automatic, with the CROW "Introduction to Electricity" Course because the instructor need not be TAUGHT BEFORE HE CAN TEACH! The graphic, step-by-step manual supplied with the course, and the complete set of easy-to-assemble component parts takes your students through 194 interest-peaking experiments which create in him a desire to learn.

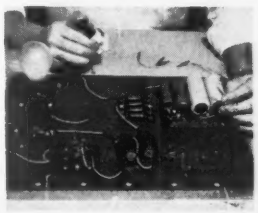
- Permanent Magnetism
- Electro Magnetism
- Bells, Buzzers, Relays, Thermostats
- Transformers
- Circuitry, Switches, Fuses
- AC and DC Electric Motors and Controls.

FOLLOW-UP COURSES FOR EXTENDED STUDY:

CROW Model 50-A, Basic Electronics—a logical sequel to the above course.

CROW Model 53-B, Electronic Tubes, Circuits and Devices—Advanced electronics including Basic Radar and TV.

Other CROW courses for every purpose . . . prices within the means of any school. Write for details—no obligation.



CROW

UNIVERSAL SCIENTIFIC COMPANY, INC.

Box 336 AVJ, Vincennes, Indiana

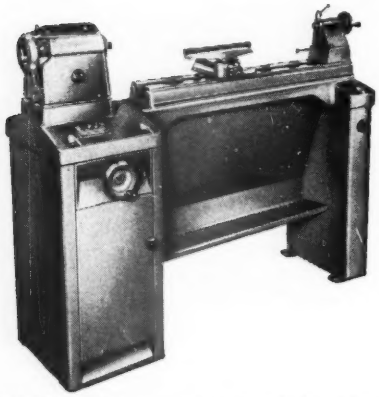
ROCKWELL-BUILT

DELTA 12" WOOD LATHE

Changing spindle speed with a turn of the handwheel is demonstrated for student by Instructor John Gudgel, Thomas Edison School, Springfield.

Safety, Versatility and Ruggedness

make Delta choice of Springfield schools



Designed for wood turning, metal spinning and light metal turning. Perfected Delta variable speed drive offers infinite choice of speeds from 340 to 3200 rpm. Long bed permits up to 38" between centers. Drive mechanism is fully enclosed for extra safety.

Six new Delta 12" variable speed wood lathes were chosen for service in Springfield, Ill. junior and senior high school shops. Here's why: "*They have just about every operating, safety and construction feature we could possibly want,*" says Alfred A. Redding, vocational education director. "Dollar for dollar we feel we've made a good buy—and are building our shop program on a sound basis."

PRACTICAL—Delta, world's most complete line (53 machines, 240 models, over 1300 accessories) provides the *right* tool for teaching *every* wood and metalworking operation. And your students learn on the same tools used so widely in industry. See the new Delta 12" variable speed wood lathes at your Delta Dealer . . . he's listed under "TOOLS" in the Yellow Pages.

***FREE* Delta Industrial Catalog**

Get all the facts on Delta 12" Wood Lathes plus helpful teaching aids for industrial arts instruction. Write to: Rockwell Mfg. Co., Delta Power Tool Division, 414L N. Lexington Ave., Pittsburgh 8, Pa

DELTA POWER TOOLS

another fine product by

ROCKWELL